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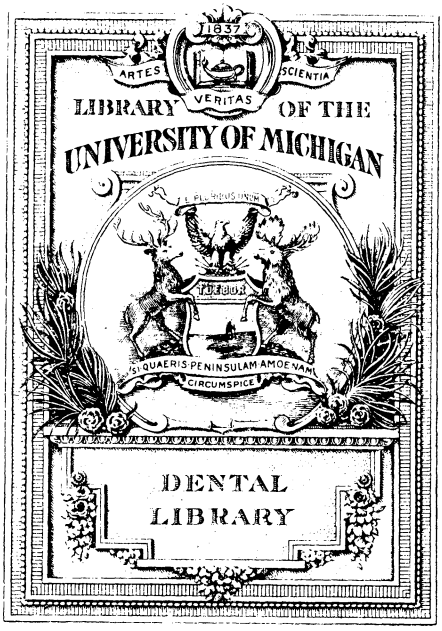
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AMERICAN DENTAL JOURNAL

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ORTHODONITA.

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CHAPTER XIX.

RETRUSION OF THE LOWER JAW—TREATMENTS—CONTINUED.

Normal Breathers.—The characteristics of the normal breathers are almost the same as the mouth-breathers, with the exception that the arches are not contracted laterally so much. The teeth both in the upper and lower anterior part are usually crowded and overlapping

A. Fig. 1. B.

each other. There is not that undue prominence of the upper lip, the upper lip being well developed and the breathing normal.

Characteristics.—Retrusion of the lower jaw.

Occlusion of the lower teeth, distal.

Upper arch contracted.

Upper anterior teeth crowded, overlapping or rotated.

Lower arch contracted, lower anterior teeth more or less crowded or rotated and elongated.

Normal breathers: Lip function normal.

Changeable area lateral halves and the anterior part of both the upper and lower arches, and at a favorable age the forward movement of the lower jaw.

In the normal breathing class, while we have the recession of the lower lip and chin, we do not have the prominence of the upper lip and teeth as in the mouth-breathing class. In the treatment of normal

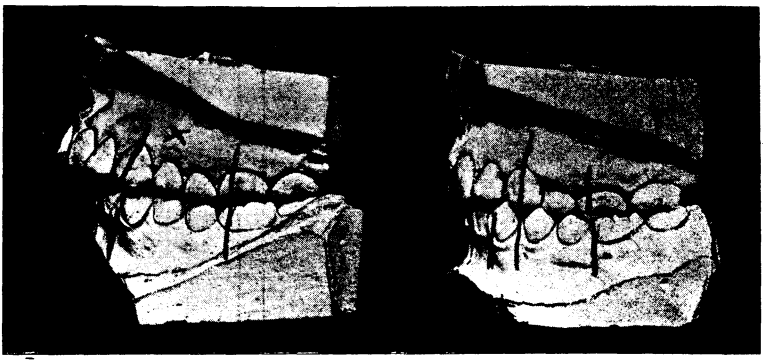
A. Fig. 2. B.

breathers, every condition is favorable for restoring occlusion to the normal by the forward movement of the lower jaw and restoring the facial outline if treated at the proper age, or before the age of 10 or 12 years. After that age only improvement may be expected.

The treatment would be to restore the occlusion to normal, expanding the lateral halves of both the upper and lower arches by the spring force of the arches on the outside, forcing a new occlusional contact and making the patient bite forward. Alignment of the anterior teeth, both upper and lower, is necessary, and also the opening of the bite by elongating the distal teeth, both on the upper and lower arch, and depression of the anterior teeth by the spring pressure of the arches. After the bite has been sufficiently opened for the forward movement, then the rubber ligature can be put on and changed once a week. In this class the nuts must be on the mesial side of the tubes on the lower molar bands. Teeth that need rotating should be rotated with the spur on the bands and the wire ligature on the arch. It is best to see this class of patients three times a week.

Fig. 1 illustrates a type of malocclusion that is most puzzling at first, and is a condition that is often passed by as being all right. The uncertainty of this case is caused by the fact that it is in a stage

of transition from normal to distal occlusion, and usually ends in such a state as shown in Fig. 2. Another condition that makes a case of this kind puzzling is the fact that the teeth themselves are usually in perfect alignment, at least they seem to be at first. Both the upper



A. Fig. 3. B.

and the lower incisors are elongated, usually the lower much more so than the upper. But the whole trouble of cases of this kind lays in the fact that the occlusion contact of the teeth is changing from normal to malocclusion.

The treatment of such a case is to first open the bite sufficiently to allow the patient to bite forward enough to change the occlusional contact of the distal teeth from malocclusion to normal occlusion. If an attempt was made to move the bite of the lower teeth forward without opening the bite, the lower teeth would strike the upper and force them outward. Then it is necessary to open the bite by soldering the tubes on the molars, pointing below the incisors on the lower arch and above the centrals in the upper arch. Then spring the arches into position. If the spring tension has a tendency to throw the lower teeth forward, put the nut on distal to the tubes, but not at first. After the bite has been opened, then the lateral expansion can be used, and with the rubber ligatures to aid in finishing up.

The time involved in treating the normal breathing class varies from three to nine months. The patients must be instructed to bite forward until it becomes a habit well established.

In Fig. 3 we have a case far too old to attempt to restore to normal occlusion. To reduce the prominence of the upper anterior

teeth and harmonize the arches, the two first bicuspids on the upper arch were extracted, then the traction screws used alone at first on the cuspids. After the cuspids were moved back into position they were held there with wires and the same traction screws used on the

A. Fig. 4. B.

wire arch with the ends looped to hook the traction screw into a spur, was also soldered on this arch for the use of the headgear in connection with the traction screws.

PROTRUSION OF THE LOWER JAW—TREATMENT.

The general characteristics are:

1. Occlusion of all the lower teeth, *mesial.*
2. Protrusion of the lower jaw.
3. Upper arch more or less contracted.
4. As a rule upper anterior teeth tip slightly backward, partly rotated or overlapping. In some cases the upper anterior teeth may be in normal alignment.
5. The crowns of the lower teeth being tipped inward and the roots outward, the anterior teeth usually tip backward, and as a rule they are slightly rotated or overlapping.
6. The changeable area is usually the upper anterior part of the alveolar process, sometimes lateral halves only; in the lower jaw the anterior part of the alveolar process or the lower maxilla.

In this class the facial outline is changed by the undue prom-

inence of the lower jaw, due to mesial occlusion, unless it is due to prognathism or over-development of the maxillary bones, which occurs only in rare instances.

In the early stages after mesial occlusion is established the teeth in the arches are usually in normal alignment. As the patient grows older and the bones become more developed, the tendency of the

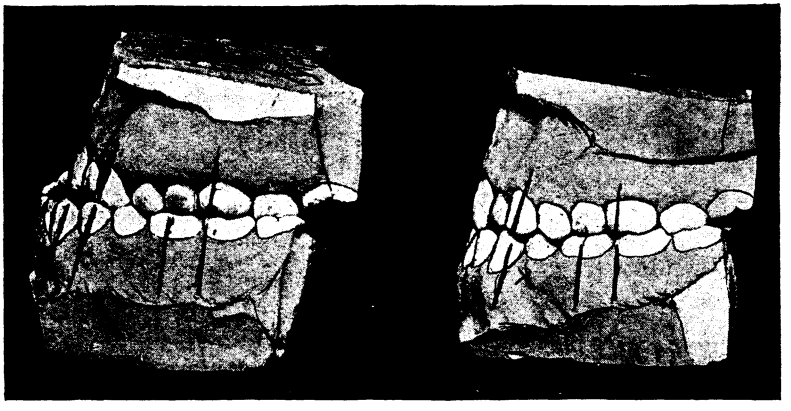
A. Fig. 5. B.

upper arch is to contract more, laterally, and finally the anterior teeth overlap or rotate. By the efforts of the patient to close the lower lip in contact with the upper lip, the lower anterior teeth are slowly tipped backward. Thus changes in both arches are fairly well established by the age of 8 or 10, but may not be generally noticed until later. If cases are treated before the age of 10 years the restoration to normal occlusion and restoration of the facial deformity may be hoped for. After the age of 12 years the treatment for moving the lower jaw backward is doubtful, and the treatment may consist of improving the facial appearance and occlusion by extraction of one or two teeth in the lower arch.

The first general consideration the treatment would be to move the lower jaw backward, thus establishing normal occlusion and normal position of the lower jaw. As movement of the lower jaw is involved in the treatment and a change will take place in the glenoid

fossa as the result of the movement, it is necessary to use external pressure to accomplish this movement, so the chin retractor is used, together with the headgear, and rubber ligatures attached to the chin cap.

Putting on the Appliance.—Fig. 4 represents a typical case of mesial occlusion, protrusion of the lower jaw. There is a slight overlapping of the upper incisors. The chin retractor is used at first with the headgear and should be worn nights, with very slight pressure at first, gradually accustoming the patient to the novelty of the treatment. Fig. 5 shows the facial outline of the case before and after treatment. Use plenty of cotton in the chin retractor and slightly



A. Fig. 6. B.

moisten the chin with vaseline before putting on the retractor. This keeps the chin soft and in a healthy condition. Instruction should be given the patient to bite backward until the upper teeth are occluding well out over the lower. In some cases, when the upper incisors are elongated and in lingual occlusion, bands upon the molar teeth, filled up with cement, may be necessary to aid in passing the contact point of the upper incisors on the lower. As a rule in ordinary cases this is not necessary.

(To be continued.)

PROSTHETIC DENTISTRY.

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CHAPTER XL.

The restoration and preservation of badly decayed roots, and the conservation of normal oral relations is one which demands greatest care and involves clear comprehension of mandibular forces.

The skillful mechanical device as well logical procedures as advocated by Dr. John P. Carmichael, of Milwaukee, induces me to give his method consideration, since it is strikingly practical. He writes:

"Many varieties of artificial porcelain crowns have been devised but little or no improvement has been made in the manner of attaching them to the root. I wish to show here a preparation of the root and a perfect fitting root attachment that when seen furnishes its own arguments.

"In the application of the crown-post attachment it will be seen at once that it can be applied to a badly decayed condition of the root with equal ease and less time than other methods. The gum is not involved in the operation of making a fitting to the root, therefore the result is a crown flush with the edges of the root, with the surrounding conditions as nature provided they should be.

"The post is so shaped and rolled as to be easily adapted to the form of the root and will permit the solder to flow thoroughly through the coil. The head of the post is so divided that the flanges may be turned down with the crimping instrument without closing the hollow of the post.

"The posts are made of a soft pliable metal that will not tarnish when heated and will stand sufficient heat to be soldered with any good gold solder in the market.

"The root is prepared by beveling to the gum, as shown in cut: countersink to half the depth of burr, shown in cut, and enlarge root canal for as large a post as the root will permit, leaving no undercuts; place platinum post in root, enlarge same to root canal and with the crimping instrument turn the end out into the countersink."

He then places a sheet of 1-400 platinum over the end of the root, punches a three-cornered hole, and with the crimping instrument turns the platinum plate into the countersink, then uses a platoria post which has been moistened and dipped in powdered 22k. solder, telescoping the first which is turned into the countersink, thus pinioning the platinum cap firmly in position between the crimpled ends of the two posts.

Then he closely burnished to the end of the root or may be swaged with rubber to the form of the end of the root. If the root canal is large a third post may be used in the same manner as the second; before removing pass a small steel broach through the end of the post; this opening will permit the solder to flow more readily to the end of the post.

The entire fitting is then removed with the screw extractor. If the post and cap become separated in removing from root, stick the parts together by flowing hard wax into the posts and while warm place upon the root to get the parts in proper position again and trim the platinum cap to the shape of the outline of the root; you now remove and place the same in the wire screen of the soldering device, place a drop of the anti-flux cleanser on the screen for a bed and pass the post through it, the cap imbedded in same. When heated, this will hold the part in perfect position.

Set a stub of a pin in the post extending out far enough to be used in removing the attachment after replacing it in the root.

Use the solder in long sticks, as shown in cut, which enables you to force the flow into the posts, thus insuring a thorough filling of the post with solder.

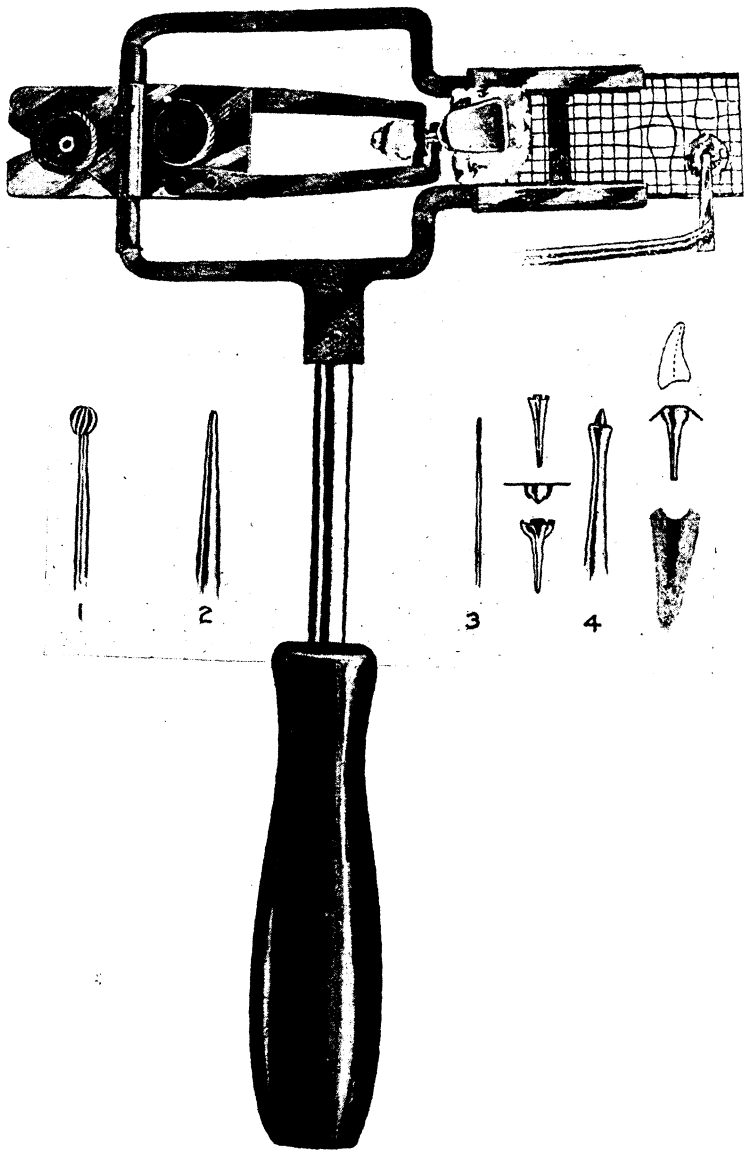
The attachment is then placed upon the root and the edges of the platinum cap burnished to a close contact with the root.

After stiffening the post with solder, never use a mallet to drive the post, except it be lightly and with an orange wood stick as driver.

Replace the finished attachment upon the root preparatory to adjusting the crown; select a porcelain crown and grind same to its position upon the root.

After grinding the artificial tooth to its proper position upon the root in the mouth, remove the attachment and heat it sufficiently to melt the hard wax upon it and seal the porcelain facing to its approximal position.

The wax will remain soft long enough to replace the attachment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and adjust the crown. Should the wax harden before the crown is satisfactorily adjusted, touch the wax with a heated instrument; when the tooth is in position, cool the wax with water and remove from root. Continuing, he writes:

"Place the piece of work in the soldering device, as shown in cut, put a little daub of investment compound upon the bed of the soldering device and turn the post holder down upon it until the tooth-backing becomes embedded in same; also, put a drop of investment compound over the post to protect it from the extreme heat. Do not attempt to remove the wax, but burn it out. It will act as a good flux. If there are any places you fear the solder will go, then paste it over with a little of the anti-flux dope.

"If the crown is to be completed from an impression, the post can be dipped in a little hot wax before running the model. Hold the instrument in the Bunsen flame and use the blow pipe at the same time, with the soldering instrument in your hand, you will find it an easy matter to flow the solder to any place desired.

"In bridge work, complete the soldering of the crowns before taking impression."

(To be continued.)

A PAUPER AND HIS TEETH.

"He is considerably over seventy, and he has no teeth, but he can use some terribly strong language on occasions," is how the Master of Westminster Union described an inmate who is now under correction because he not only swore at the night nurse, but persisted in solacing his rest at night with many cigarettes, in spite of repeated protests and warnings that the practice is dangerous alike to himself and all in the union.

The board a short time ago decided that they would make a present to the old man, who has seen better days and is well educated. As he was toothless, they ordered a double set of teeth, costing £4. But the old man has now set the rules of the establishment at defiance by smoking in prohibited hours. Accordingly, to bring him to his senses the teeth are being withheld. As soon as he says he will be good, in go the teeth, and he will again know the joys of crusty bread and the succulent pleasures of unchopped meat.—*Dental Surgeon.*

THE STUDY OF CERTAIN PHENOMENA AS A PRELIMINARY TO DENTAL THERAPEUTICS.

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It is becoming more and more a recognized fact that all biological phenomena must, as a last analysis, be settled through the investigations on the physiological activities of the cell. It must be remembered that it is only a little more than half a century since Schleiden and Schwann revealed the fact that all organic substances, possessed of a physiological activity, was made up of minute bodies or structural units known as cells.

In the higher organization of life, both in the animal and vegetable kingdoms, there are a great number of these minute cells combined to make up the whole of the organization. It was at first thought that the body was composed of a homogeneous mass, but the microscope has revealed the fact that it is composed of innumerable minute bodies that have their special organization within themselves. They are wonderfully diversified in their morphological structure as well as their physiological activities. The muscle cells, the bone and brain cells, are so formed as to carry out certain functional activities, each one having its own special work to perform, but still there must be that continuity of physiological activity in order that each structure can perform its individual function.

It is well understood that the function of physiology is to explain all vital phenomena and their relations to each other, but when it is considered that this study has only been very largely confined to the chemical and mechanical activities of the higher vertebrae, it can be seen at once that there is a vast field of physiological science that remains absolutely unrecognized in the biological world.

Cellular morphology is the forerunner of physiological research as applied to the living cell, and upon these two factors rest the explanation of all vital phenomena both in health and disease. It was upon the study of cellular morphology that Virchow established his

well known cellular pathology, thus demonstrating the fact that all the various functions of the body both physiologically and pathologically are but outward manifestations of cell activity. It was through the study of cell structure that Kolliker and Remike made the scientific world familiar with the embryological developments of the multicellular forms of life.

While the microscope reveals many facts relative to the cell with regards to its morphological arrangement, still the chemistry of living subtsance is a vast field yet to be explored before a full explanation of the vital manifestations of life are explained.

It is a well known fact that the physical world is made up of sixty-eight elements, still there are only twelve that are constantly present in living substance. These twelve elements enter into the organic bodies through three chief chemical bodies, and through their chemical transformation they form that vital phenomena known as life. These three substances that enter into living protoplasmia are known as proteids, carbohydrates and fats. The first named substance (proteids) quantitatively constitutes the chief constituents of cell life. The chemical elements that enter into proteid are carbon, hydrogen, sulphur, nitrogen and oxygen. The presence of nitrogen in proteids is one of the distinguishing features between proteids, carbohydrates and fats.

While the chemical composition of proteids is not well understood still there has been sufficient investigation on this phase of the subject to demonstrate that it is an extremely complexed molecular structure, although it contains only the five elements, yet the atomic grouping reaches sometimes into the thousands. It has been further demonstrated that this chemical subtsance is very essential to all living protoplasmia.

It would be quite out of place to discuss this important substance in all of its varied phases, with reference to living substance, but it will be understood that the five elements herein mentioned in proteid substance must be carried into the cells of both the multicellular and unicellular forms of life by way of the proteid molecule.

The next chemical substance closely allied to the nutritive function of living substance is carbohydrate. This latter substance chemically contains but three elements, namely, carbon, hydrogen and oxygen. The carbon atoms found in the molecule of carbohydrate is always six or a multiple of six. It will be observed that carbohy-

drates contain no nitrogen, likewise the fats are a non-nitrogenous substance and chemically, are not always essential to the chemistry of living protoplasmia.

Since we recognize that there are twelve organic elements present in living substance these elements must come to the organism in some form as food and the chemical structure of food and the method by which it is introduced into living substance is as varied as the forms of organic life. A general food for all organism is not possible. Green plants are able to construct their organic substance out of inorganic material. For instance, carbonic acid and various salt solutions are sufficient for plants to build up their chemical complex structure, while on the other hand animals require organic food, and without exceptions they must have complexed organic compounds, such as proteids, carbohydrates, and fats, out of which to build their body substance.

The fungi in a certain sense stands between these two well defined kingdoms, for they are able to obtain the nitrogen necessary for their organic substance out of inorganic salts, although they must have an organic chemical structure out of which to obtain their carbon. However, there is an exception to this rule, inasmuch as there is a form of bacteria that can obtain their nitrogen and carbon from ammonium carbonate, thus in this respect they are like green plants, able to obtain their food stuff from inorganic sources.

The minimum and maximum quantity of food necessary for living substance is a question that has received but little investigation and that only in the higher forms of life. The quantity necessary for the maintenance of the metrobolical equilibrium of the human individual is of the highest importance. Voit has shown that an adult man performing active work and obtaining 180 grs. of proteids, 56 grs. of fats, and 500 grs. of carbohydrates, should be in perfect metrobolical equilibrium, provided the individual is excreting the same quantity of substance as he is taking in with food stuffs; especially should that be true with regard to nitrogen and carbon, and these two elements should be determined separately, for it is a well known fact that when the body is in perfect carbon equilibrium it does not necessarily mean that it is in perfect nitrogen equilibrium. Therefore, the sources from which these chemical elements come, vary in so many respects that it is extremely difficult to know the exact

reasons why they are not always in harmonious relation with each other.

It was for a long time believed that there were sharp and well defined lines between the metabolism as it existed in both the animal and vegetable kingdoms, but since the recognition and investigation on that low form of life known as bacteria, it has brought considerable confusion into the science of physiology. For instance, many of them live and are able to obtain their nutrition from inorganic sources, while others must be in the presence of organic substance where they can break up this compound and obtain their nourishment from strictly organic sources. There are, however, some low forms of life that belong strictly to the animal kingdom that must have a special source from which to obtain their organic nutrition; for instance, the fur-moth that lives exclusively upon the hair of furs that contains a special substance, almost a pure chemical substance, which is absolutely necessary for them as food stuff. The chemical substance which they extract from the hair is known as keratin and is very closely allied in its chemical constituent to that of proteids. So various animals must obtain their food from special organic sources.

It is, however, a pretty well established fact that there is no animal thus far known that can live strictly on a carbohydrate or fat diet, not even when the two substances are combined. So it will be seen that proteid is a chemical compound that is always essential in the maintenance of the life force in the animal kingdom. What is absolutely essential for the existence of one organism might possibly endanger the life in another.

There is an important factor that must not be lost sight of in the metrobolical changes that take place in the animal economy, and that is the decomposition processes. The minimum amount of food necessary for the equilibrium of body nutrition disturbs the metrobolical equilibrium far greater than an excess of food would produce Consequently in order to keep the body in perfect metrobolical equilibrium it must be able to obtain these three chemical compounds, namely, proteids, carbohydrates and fats, in proper relation to each other. When these substances are taken into the animal organism in their proper chemical state they act as cell stimulus and increase the cell activity of those parts that they come in direct contact with, to the extent that the cells will excrete a substance that has an enzymotic

action upon this properly prepared food stuff, and they pass into the cell substance as free and uncombined elements and there are reconstructed into protoplasmia, which is capable of manifesting itself with all the phenomena of life. The process of building up living substance is a synthetic process, but differs from all other phenomena of like character, in that it contains the possibilities of irritability and which manifests itself as a vital force which is inherent in all living protoplasmia.

If time and space would permit the discussion of the mechanics of cell metabolism it would be found to be a very complexed chemical process, in which there takes place the highest chemical reaction possessed of a wonderful physical process, all of which needs further study in order that a clear explanation may be had regarding certain vital manifestations that are at the present time practically unknown.

As we approach the higher forms of life we see that wonderful differentiation of cell activity and how interdependent one cell is upon the other, and morphologically as well as physiologically they have a certain function to perform that belongs solely to that individual cell; but all are given expression to the interaction of two factors that are manifesting themselves in their external and internal vital process. Therefore anything that would arise that would influence either of these factors would necessarily change the vital manifestations that exist in the cells or tissues of the body, and therefore the change of environments is consequently influencing the internal relations of cell activity in the tissues of the body.

Therefore, since we recognize that metabolism is the source of the vital manifestations of the body and unless these twelve elements can enter the body in the proper chemically constructed molecule and be broken up and reconstructed in the proper chemical formula of the cell. For instance, some of these elements may be built up in the cell wall, nucleus, or in the cytoplasmia of the cell, but it must be understood that these elements do not enter into the protoplasmia as ions. Therefore, in the process of building up the enamel and dentine of a tooth these inorganic salts are not carried as sodium chloride or calcium carbonate, but are carried there as separate elements and deposited as a chemically formed substance. This synthetic process is a comparatively simple one, consequently the more firmly are the atoms bound together than they are in the complicated synthetic produce, such as the proteid molecule.

It is a well known physical law that there is as much energy stored up in a mechanically combined substance as is required to construct it, consequently if we are to have strong and robust individuals with teeth containing more potential energy than the chemical substance that they are constantly brought in contact with, it will be necessary to see that the cells out of which the individual is constructed, as the results of inheritance, and its adaptations of the external conditions of life, is of a quality capable of building up this synthetic compound into the highest chemical and physical structure, with sufficient potential energy stored up in the cells and tissues of the body, that it w illbe capable of resisting all ordinary external physical forces that it may come in contact with.

It has been said by an eminent author, "In no case can anything appear in the form of disease which was not previously present in the body as a predisposition." The external agents such as bacteria and other such forms of disease producing organisms are only capable of making this predisposition apparent. He further says that we can either heighten this predisposition or remove it altogether; and herein lies the science and dentistry of today. When it is understood that predisposition depends upon the inherited vital manifestation of the body and its adaptations to its external environments, and that external environment means the food and drink that is taken into the body, would it not seem possible that eventually immunity might be established to the disease known as dental caries and various other manifestations of the morbid processes of the oral cavity?

If all the biological phenomena are taken into consideration it is at once observed that an inherited predisposition to a certain form of disease, like dental caries or pyorrhea alveolaris, and the external environments are much as to interfere with the metrobolical equilibrium of the body, and especially if this environing condition may be in the early part of the life of the individual before the immunizing powers of the body have reached anything like their higher development, that usually appears in the individual after he has reached the age of maturity.

Since we recognize that metabolism has the wonderful influence on the building up of the body substance, this influence of nutrition can be better demonstrated on the low forms of life, such as bacteria. For instance, we know that the so-called pathogenic germ does not

always have to live as parasites, for they can be cultivated artificially and in some instances they may lose their pathogenic power, while on the other hand they may be able to produce certain fermentative processes. Take for instance the germ of cholera, when grown on a potato it produces a brown pigment, but when grown in a culture media containing sugar it produces acid fermentation. On the potato it produces no acid, while in the solution containing the sugar it produces no pigment but an acid fermentation instead.

One of the most interesting biological problems connected with the nutritive function of bacteria, and the way by which they are influenced by their external environments, is that of the anærobic. Certain forms of these organisms will not grow in the presence of free oxygen of the air, but must be surrounded with an organic compound and construct out of it their own body substance. It is possible, however, in many instances, to grow these bacteria in the presence of the free oxygen of the air until they pretty comfortably adapt themselves to their external environment. This physiological phenomenon of bacteria is a very interesting and far-reaching subject, both with reference to disease and fermentation.

We recognize in all forms of life the importance of surrounding influences coupled with the best possible nutritive substance to get the highest development in both animal and vegetable kingdoms. What is true of the highest forms of life is also true of the lower forms of living substance, and our interpretation of disease and the etiological factors which enter into it must base on broad biological ground. The remedy of its alleviation rests with the public, state and nation at large, for without their assistance there will be a continual struggle for existence, associated with pain and a great loss of life, both in infancy and adult age, but the foundation rests with the proper nutrition of infancy and childhood.

(To Be Continued.)

OPERATIVE DENTISTRY.

A Series of Shop Talks.

BY R. B. TULLER, D. D. S.,
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No. XI.

MORE ABOUT SILICATE CEMENT FILLINGS.

Further experience with, and knowledge about, silicate cement or beryillium cement fillings, makes another talk timely upon this new and exceedingly interesting and valuable substance.

In a previous article I gave my experience in restoring to a normal appearance the labial and lateral contour of the six anterior teeth of a young lady that were badly affected by abnormal development of the enamel.

They were such teeth as not infrequently come to most dentists, presenting a trying problem to know what to do to remedy the defect. Not only were there chains of deep pits all across the labial surface involving the lateral outline, but the incisal portion of several were so bare of enamel that they looked like thin flat chisels of dentine with a suggestion of enamel here and there. There is no other thing that I know of that could have been utilized, rationally, to remedy the defect in the case, except cutting off the teeth and substituting porcelain bandless crowns. Such crowns selected, fitted and set in the most approved manner makes, as we know, a very perfect counterfeit of nature's perfect handiwork. Such crowning is usually a last resort; but preferable, I think, to any sort of inlay work that could be done in such extensive conditions, not overlooking the telescopic inlay which has its value in some cases.

It is a sad thing, however, to cut off a strong, healthy tooth, though ugly in appearance, if there is a possibility of restoration with any reasonable show of premanency with good aesthetic results; and there is a hesitancy on the part of the owner of the teeth, as well as the dentist, about having a strong, serviceable (though deformed tooth) ruthlessly excised.

Cutting off and crowning these teeth in question had been suggested by other dentists as about the only thing that could be consistently done, and the same thought came to me at first. Not feeling altogether justified in pursuing such a radical course, my second thought was to try the silicate cement, samples of which had been handed me to test. As stated, I followed out this thought with the most happy results in securing natural shades and contours. It would have taken the trained eye of a dentist and a close inspection at that to have detected the repair with artificial enamel; but I could not insure any degree of permanency from my own knowledge and experience, except perhaps a dozen fillings of the same material that had been in about a year without signs of disintegration from either wear, chemical attack of the fluids of the mouth, or any inherent defects in the substance itself. This enamel is the art that conceals art in about the truest sense; let us hope it will stand the test of time.

Later experience with this artificial enamel has strengthened my faith and admiration, and I have secured a complete outfit of shades for future use; and the instruments suitable to work it with, a set of agate-pointed burnishers being most desirable; tortoise ivory or bone taking second place. There are, no doubt, many dentists in this country with much more and larger experience than I have had with this enamel, but I believe it has not been introduced here much over three years. If, however, it has stood well the test for that time; if it has not wasted or worn too much when properly mixed and inserted, it is fair to presume it has at least an average durability. I am assured that in Europe it has stood a five-year test for durability, and that it is fully up to a general average. The same rule holds good; if it stands up and is still doing good service for five years, it will evidently stand longer. I am assured by the Ascher people, who as I understand originated this artificial enamel, that in several instances entire crowns have been made of it which have given satisfactory service, but I believe that in such cases something in the way of metallic reinforcement is employed, and the work in such a case is not equal in appearance or strength to a good porcelain crown. But such a test is certainly extreme.

My latest experiments were in facing an open front gold crown with artificial enamel, and building out the distal corner and side of a central incisor in an emergency. The crown referred to was a

second bicuspid support of a four-tooth bridge that was very firmly in place. The gold used was, perhaps, thinner than it should have been; at any rate it had been finished so thin that the labial face was broken through. A ragged hole developed, cutting the lip. I could not, without much trouble, dislodge the bridge, and something had to be done in place to remedy the trouble. I cut out the gold like an open-faced crown, secured anchorage under the edge of the gold and filled with the enamel. The effect was very satisfactory in every way. It looked far better than any open-faced crown, because it was flush with the gold and with no evidence of a joining of the two materials, except the color difference.

The next case was a lady with a lateral gold filling suddenly dislodged by the breaking away of the incisal corner. She was in great distress because she was to attend a very fashionable function in the afternoon of the same day, and the time open for any repair was very short. She did not want a gold filling again and so I determined to use the artificial enamel. The result was so absolutely perfect that I could not refrain from calling in a confrere to see it, my patient being willing. I told him I had just repaired one of the incisors and asked him to locate it. He failed to find it, looking with expert eyes for the marginal outline of a porcelain inlay, or some slight variation in shade. The repair was fully one-fifth of the width of the incisor, but had I not known where it was I could not have found it myself by any ordinary visual inspection. The shade, translucency, blending and lifelike brilliancy were all perfect, and my lady went to her function and smiled with cheerful content, for not a soul could suspect a mended tooth.

Will it last?

I can not answer. Time will tell.

It was an emergency case and if it lasted until after the function, it was worth several times the price to her and I shall get a good fee for it at that.

This brings me to what I am satisfied may often be done to repair the loss of a porcelain facing from a crown or bridge—certainly, as emergency work and immediate relief, if nothing more. Good service, approaching permanency, would depend largely on circumstances, and particularly as regards anchorage, and somewhat on mix and manipulation and freedom from moisture, which is very essential. Usually the recess left by the lost facing, with the two

headed pins left behind, are quite sufficient; provided the *incisal edge* had the usual protection of gold. Not so much could be expected where this protection was lacking.

Again, this enamel may be used to fill the joint between a porcelain crown and root by packing the material around the pin in the crown and while yet plastic pressing it against the root previously coated with vaseline; then take away before moisture gets to it, and allow to harden. It should then be trimmed to the impressed outline of the root and then varnished with quick drying varnish; and when this has dried, it may be set with oxy-phosphate cement or gutta percha, insuring a good close fit.

Still further, for bicuspids and molars it may be used as a facing for gold crowns, being introduced into the crown, molded and finished before crown is set. In fact, in some instances the gold may be simply a hood or an open cope buccally and occlusally. With the material packed into the open gold, and if moisture can be surely excluded, a bite may be taken if done prior to crystallization (the occluding tooth being oiled) and then taken away and carved after hardening, or partial hardening.

The intense hardness and susceptibility to high polish that comes after a few moments of crystallization, is due, I believe, to beryillium, of which the material is quite largely composed. Beryillium is a constituent of the beryl, a stone once highly valued as a precious jewel, and allied (barring color) to the emerald.

To get the best results in mixing this artificial enamel, the first mix of a small portion of the powder into the liquid should be rubbed and spatulated with a bone spatula for at least a full minute before adding more powder. *Then care should be taken not to add powder when the mix is too stiff;* for the reason that it is impossible to thoroughly incorporate it; and the result would be a filling that would flake and disintegrate. It should be forced into the recesses of the cavity before it becomes too hard and surplus removed before too stiff. It should then be pressed with suitable instruments to shape it, and avoiding the disposition to smear the substance, as is usual with most plastics, and especially after crystallization sets in. The smearing effort, when too stiff, results in producing a surface that may flake, and especially if not oiled with vaseline. Moisture must be kept away from it quite a long time; hence varnishing should follow finishing, or hot parafine may be used to coat it. When disks

and strips have to be used, they must be smeared with vaseline; and something finer than cuttle-fish should be used finally. Where it can be satisfactorily manipulated, the agate burnishers or others (barring metal) leaves the best surface.

I can not imagine that there can be material shrinkage in this enamel, but such may be the case. I have not made any tests or had any experience that would indicate such a fault. If the material shrinks much on hardening, I believe it is all toward its cavity contact and without any inclination to disturb that contact. If it were otherwise there would soon be evidence in the way of making the cavity outline visible, and one feature of this enamel is that with the shade right the closest scrutiny fails to detect the outline.

Whether it has the durability we desire or not, it surely has its place in dentistry; and, if need be, renew it at intervals and preserve in mouths of patients highly aesthetic qualities.

Since writing the above I have read of some tests being made in glass tubes for shrinkage. These were out of the mouth tests, and Ascher particularly states in a circular with the material, that positively no shrinkage occurs *in the mouth.*

ORIGINAL CONTRIBUTIONS

TOOTHSOME TOPICS.

BY R. B. TULLER.

Yas,

Ai bane got some more again into dentistry, an' Ai bane make lot of money.

Yas, Ai go back by Onion Dental Skollege an' gat doplomy. Han bane olright, too. Han say, "Doc Ole bane by us swex veek, an' hem know more as da boss." Das bane good doplomy.

Yas, Ai got me doplomy, but ven Ai gone by dan State Board, Yimreed han got cranky noddle an' hem make speak at Ole yust lak han vas Roosenvelt, an' Ole vas trying get head boss yob on da Panamahat canal.

Den Ai tank a tink, an' Ai hide a twenty-five-dollar bill in my han an' Ai shake han vith Yim an' say, "Das olright, Yim. You write out license paper to nobody, see? Yust have board sign all O. K. an' yust lose him outside da door. Ai bane pick hem up, an' das olright."

Say, you not know vat a dem crank Yimreed bane. Han tank hem bane da whole ting, an' Ai goin' vote nex tam to keep han off das board. Ai alvays been take hem for yentilman, an' hem bane yust dem knocker an' kicker. Ai gass Ai know. Han trow dan $25 bill in my face, and den han kick me in da coat behind wexteen time, an' shove me out. Das da kine yentilmans Yimreed bane.

Never mine! Ai got it in ver hem olright, you bat! Ai got pull comin', an' maybe Ole bane on board some day, an' Yimreed come 'round ver license. Oh, yas; yust vait!

Vell, Ai not got license, but you tank Yimreed got head of Ole? Not on your tink pipes! No, Ai lay low for mans who got doplomy from trust skollege an' license too, an', Ai gass yas, he listen by Ole. Trust skollege stan' in by Yimreed all O. K., but das olright, Ai bane get trust skollege man's all O. K. an' han go snookles mid Ole olright an' trust board can go by hal! Yas, you bat! Trust skollege an' Yimreed all bane one. An trust board an' trust skollege all bane in snookles. Ai know.

Olright, let 'em gone, Ole got first-class dental parlor yust all same, an' Ole bane da whole boss. It bane lak dis: Ai bane got goot vomans all O. K. an' her bane got goot wad in her sock, you bat! Har say: "Ole, you go over by das trust skollege an' got a mans, so han bane doplomy mans', an' den ve bane put up da dough an' you have dental office. You bane boss; hem bane da dentist.

Say, my ol vomans, har bane olright, an' you find Dr. Ole D. D. S. olright, an' hem run dentist parlor O. K.; an' hem run dental skollege, too, by yiminey!

An' who you tank bane da perfesser? Hey? Vell, you come 'round and see. Ai tank Ole bane a perty good perfesser. Hem bane have eye skinned all time by dat Onion Dental skollege an' hem learn whole ting, perfesser an' all.

Ole got goot head, all O. K. Hem say to hems snookle, "Listen; Ai brang da dough an' Ai be da perfesser, yas. You brang trust doplomy an' license, an' you bane da skuperintendent, and ve have no trouble by Yimreed. See? Den ve get two more trust skollege fellers an' von nicker mid uniforms, see? to stand down by da side-valks an' steer."

Hem say, "Ole, you bane got goot headt—you bane a finanskeer an' a permoteer, an you bane fine faller all 'round." An Ai bat you hem vas right.

Den Ai say, "You hole on, Ai not tru yat. Ai brang da dough an' Ai bane da perfesser, but Ai got to beat Yimreed yat. You got to bane da owner on da paper, see? but Ai goin' be da owner all da same—me, Ole.

"But Ai don't bane fool an' stick out sign, Ole, D. D. S. No, Ai go better den dan dat, see? Ve go an' put out sign da Great U. S. Norvegan Dental Skollege Parlors. Vot you tank, hey?"

Hem tank olright. Hem trow up hem's hat an' hem say, "Ole, you bane a regular Purpont Morgan. You bane da Purpont of da dental professions of Chicago. By yimminetty! Ve make millions."

Vell, Ai dond take much skollups of myself, but Ai tank Ai tank it out perty vell. It don'd bane a year yat, an Ai bane go tru skollege an' not only have Ai got a dental skollege parlors, but Ai bane da high mucky-muck perfesser an' Ai bane too schmart fer Yimreed olright, see?

You come up to my skollege for to get teeths fixed; you tank Ole

fix 'em? Ai gass not today; some oder day. Ole bane da finanskeer in da front office, an' da perfesser too. Good lookin' girl lat you in—maybe. Good looking, you bat! It all bane in da bizness.

Vell, Perfesser Ole hem find out how much money you got, and hem look in your mout an' hem say, "Vell, vell, you got bout $100 vort of vork yare, an' you mus got 'em done right avay quvick or you gat dose blood poisons and go soon out by da skemetery.

You don'd got $100? Ai take $85. You don'd got $85? Ai take $75. You don'd got $75? Ai gat you somevere.

Yas, ve bane got big ad in da papers, an' ve say, "Dr. Yon Yacob han bane da great dentist from Norvay an' Sveden an' Holland an' Paris an' New York." (Dot bane so; hem not there, so hem bane *from* there.) "Hem bane know more as all da rest. All vork done under a perfesser." (Me, Ole.)

Ven von feller vot ve hire do some vork, hem say bime-by a little, "Vell, vell, it is too bad, but you got a bad skase. Ai have to call da skuperintendent." Das olright, olright. Da skuperintendent han look an' han say, "Vell, vell," etc., an' han say, "Ai bane sorry for you, madame, but you have a difficulty sure. Ai call da perfesser."

Den har come Ole, with hair long an' combed back straight, and hem's moustache curled; an' hem vare long black coat, an' han say, "Yas, yas, har bane a bad skase, but ve tak care of you olright yare. Dr. Yacob you gif dese skase personal attention." Den Ai take a card an' draw an' say, "You fix hem dis vay," an' hand hem da card. On da card Ai yust say, "Soak em $39." Den Ai say to da patient, "Ve ought to get $45 or $50, but ve lat *you* down easy. Ve don'd hold nobody up here any vay. Don'd scharge too much, Dr. Yacob."

In our ad in paper, ve say, "Goot set of teeths, von dollar." An' ve got 'em, too. Oh, yas, loose teeth on some vax. Ve couldn't make 'em up for dat. "No," ve say, "made up in plate, da cost $4.99; but *you* vould not like 'em; lak dese, $7.98, or dese at $14.93. But lat us show you vhat you really vant. Look at da difference. Look at 'em shine. Dese $25 teeths to you for only $20. Ve vouldn't do that, madame, but you bane got a small mouth. You gat dem teeth, den you bane able to bite beef bones an' leather beefsteak."

In anoder place ve bane have a box of old misfit teeth, an' ve tell 'em if dey get fits out of dem da can have 'em for $3.00. No, dey don't try, but we ketch 'em somevere along da line.

Are ve doin' goot bizness? Oh, no—$600, $700 a day, net. Bargain days sometimes $1,000. You tink Ai get ahead Yimreed? Hey? Vot? Hem bane yust a dentist; Ai bane perfesser, an' own da whole skollege. An' Ai bane got four mans, tree boy, a nigger and two girls (two peaches, you bat!) vorkin' for me.

Say, me, Ole; Ai don't care a skioodle ver da trust. Ai goin' have some pull comin' an' you don't get scared if you see Ole on da board. Same time, you bat! Yimreed hem gat 23, maybe.

A SHORT METHOD OF MAKING GOLD CROWNS.

BY GEORGE T. BANZET, B. S., D. D. S.

Although the gold crown is not used to nearly the same extent as formerly, yet there are many occasions where it is indicated, and to keep pace with the progress in other branches of dentistry, it must be perfect; first, in adaptation to the root, so as to reduce gum irritation to the minimum; and second, the *perfection* of occlusion must be obtained, which perfection can only be obtained by carving the cusps.

My method includes the fitting of the ferrule to the tooth to be crowned, and said tooth should always be devitalized, as only a devitalized tooth can be properly prepared to receive a crown, and future trouble be avoided. When the ferrule is fitted, leaving just sufficient space for the cusp between the top of it and the occluding surface, a combination bite and impression is taken with modeling compound, and mounted on a crown articulator with plaster of paris.

After the plaster has set, and the modeling compound removed, nearly all of the plaster is removed from the inside of the ferrule, leaving just sufficient to maintain its attachment to the model.

A portion of modeling compound, sufficient to obtain an impression of the occluding surface is placed in the ferrule, the articulator closed and the compound chilled, the articulator then opened and the cusp carved, and the carving finished by making a slight depression in the compound at the top of the ferrule, slightly exposing its edge. The ferrule and cusp is then removed from the model and invested in a Brewster cup containing modeling compound very much

softened, and then quickly chilled so as to avoid changing the shape of the cusp.

Pure gold plate, 38 gauge, is placed on the cusp, the cup put into the cylinder and swaged with the water bag, in the Brewster press, which will give a perfect reproduction of the cusp, with the top of the ferrule clearly defined, this indicating where to trim off the surplus.

The cusp can then be filled with 22k. solder, and united to the ferrule, giving a perfectly fitting crown.

This method is chiefly recommended because of its obviating the necessity of securing either die or counter-die, thus very much shortening the operation, without in any way detracting from, but rather increasing its accuracy.

CHLOROFORM AND ETHER IN THE DENTAL OFFICE.

BY W. H. DE FORD, M. D., D. D. S., DES MOINES, IOWA.

An editorial in the AMERICAN DENTAL JOURNAL for December, 1906, says "the number of deaths in dental offices from the use of chloroform and ether are becoming alarming." It is remarkable that many, many more deaths do not occur from the use of these agents in the dental office.

The dental office is not properly equipped for the administration of these anesthetics. A dental chair contra-indicates chloroform and ether. It is a dangerous procedure every time you induce profound anesthesia in one of these chairs. A common couch is better.

Almost universally when chloroform or ether is administered in the dental office the patient has had no preliminary preparation for the anesthetic. They come from a distance, frequently without an appointment, and insist on an operation. The dentist telephones around till he finds a physician at leisure who can administer the anesthetic. The patient takes the chair and is ready when the physician arrives. The dentist says, Are your clothes tight? The patient says no—always no. Do you wear a corset? Yes, but it is not tight. Loosen it, please. The patient pulls the string and undoes the knot. The physician arrives, inquires, Have the clothes been loosened? Yes.

In his hurry he does not look to see. He administers the ether or chloroform, and the moment the teeth are extracted grabs his bag and away he goes, not waiting till the patient returns to consciousness. This is not an exaggerated account of the method of procedure in a dental office.

I wish I could make it plain that an anesthetic is dangerous in proportion as it is administered correctly or incorrectly. It is all in the administration and proper preparation of the patient.

Chloroform and ether for anesthetic purposes should never be administered in a dental office if a hospital is available. The hospital is the place for all such cases. Have the patient go to the hospital the day before the operation and be prepared physically. You can arrange to operate at 7:30 or 8 o'clock in the morning and not interfere with the office appointments. An anesthetist, nurses, surgical table, proper temperature, all known antidotes and an abundance of help is present in case of an accident.

Your instruments are sterilized and in the operating bag by the time you remove your gown and are dressed. The patient has the best of care in the way of post-operative treatment, and can usually go home the same evening. This is the ideal way for all chloroform and ether cases where a hospital is available.

If a hospital is not at your command, *refuse absolutely to have ether or chloroform administered in your office, or equip yourself and your office properly for these agents.*

Procure a surgical chair. They are not expensive. Such a chair is always handy. It can be used for making examinations, taking an impression or bite, changing a treatment or extracting a tooth when the dental chair is occupied, and when it becomes necessary to administer ether or chloroform *it can be converted into an operating table.* Inform yourself as to the preliminary preparation of the patient and see that this is done when you know in advance you are to operate. The office preparation should, in the case of women, consist of *removing all clothing,* and furnish them a muslin gown, and an ordinary sheet should be the only covering. If an accident arises you can get at your patient and accomplish results. Have the best anesthetist in the county, and no other. Always have the same one, if possible. You learn to work together in this way just as a good baseball battery, understand each other, know signals. This has its advantages when members of the family are present.

When through operating have the physician remain till the patient comes out from under the anesthetic. The table should be rolled into a private room and the patient not disturbed for three or four hours. Have your lady assistant or a friend present. Never leave a patient alone in this condition. They are apt to doze, and, blood collecting in the throat might cause sufiocation. One of the brightest dental surgeons in Iowa lost his life in this way following a tonsilotomy. An attendant should be present, and frequent rinsing of the mouth with antiseptic soothing agents makes such an accident impossible.

If the precautions here outlined are observed, deaths in dental offices from ether and chloroform administrations will be rare.

PRESCRIPTION FOR OBTUNDING SENSITIVE DENTINE.

℞	Menthol,	gr. XX
	Chloroformi,	F. ℥ss
	Etheris,	F. ℥j

M. Sig:—Use as directed.

This will not completely de-sensitize all dentine, but in large cavities where there is an extensive area involved, and where the dentine is extremely sensitive, take a little pellet of cotton, saturate it with the above liquid, place it in the cavity after the rubber dam has been adjusted, and you will find by the time you are ready to excavate the dentine that the ether and chloroform have volatilized. The value of this remedy depends largely upon the volatilization of these fluids. As these two liquids are volatilized there is abstracted from the tooth structures a certain amount of heat, and that volatilization drives the menthol into the decayed dentine. You cannot remove the decay painlessly in all instances, but you will be surprised to find at times how painlessly you can remove it after applying this remedy.—*J. P. Buckley, Chicago.*

SOMNOFORM VERSUS OTHER ANESTHETICS IN DENTAL PRACTICE.*

BY C. M. PADEN, D. D. S., CHICAGO.

I take great pleasure in opening this discussion in favor of somnoform, an anesthetic which has been much discussed, and one which has been greatly ridiculed by some members of the profession, either through ignorance or jealousy. An anesthetic which I think has the smallest mortality of any anesthetic in the medical or dental world today.

The first thing I will endeavor to do is to answer a paper, written by Dr. J. W. Ritter, read before the Illinois State Dental Society at Springfield, May, 1906, and published in the DENTAL REVIEW, page 972, entitled "Somnoform, Its Use and a Few Personal Experiences With It."

Those of you who have heard or read the article can plainly see that Dr. Ritter's whole aim was to condemn the anesthetic.

I will call your attention first to his statement in regard to its mixture. Quoting Dr. Rolland, who compounded the drug, ethyl chloride 60 per cent, methyl chloride 35 per cent and ethyl bromide 5 per cent. "The qualities of the mixture are entirely independent from the individual qualities of its component." "A statement which I fear many present cannot accept as true in every case of drug combination, and if not true in every case how are we to be absolutely certain that it is true in this?"

Have you ever heard of a man in this or any other country who experimented with this combination, in the laboratory or on animals, to determine its action throughout the entire system, and found that Dr. Rolland's experiments and statements were not true?

Why do we somnoform enthusiasts believe Dr. Rolland's statements to be true? Because from our experience and with our numerous administrations finding the induction, duration and after-effects exactly as he states. When he said "The combination of these drugs changed the action of the individual drug," he spoke from actual

* Dr. Paden is desirous of a full and free discussion on this important subject, and will be pleased to answer any question. The columns of THE AMERICAN DENTAL JOURNAL are always open to discussion of any subject pertaining to dentistry.—EDITOR.

experience and the thousands and thousands of administrations by us have proven to us that his statement is true.

It is a fact well known to the medical and dental profession that the combination of certain drugs is used to bring about an effect that could not be brought about if the drugs were used individually. As well known examples of this combination one might mention morphine and atropine or acentanilid and caffeine.

It matters little to us what the mortality of the three drugs is when administered separately. It is the combination of them (somnoform) that we are interested in.

Dr. Ritter cites two cases from his experience: first that of a patient who became frantic during the administration, and it took two men to hold her in the chair; in the mix up the patient kicked him (Dr. Ritter) in the stomach and landed him in the corner of the office.

How many of my readers ever heard of a patient becoming frantic under nitrous oxide, chloroform or ether? I might call your attention to an article, printed in the *Dental Digest,* April, 1906, page 502, entitled "Gas Makes a Negro Jump." "This month a young negro in Washington, D. C., jumped through the window of a dental office, while under the influence of nitrous oxide." Also to one from the *Pittsburg Dispatch,* June 21, 1906: "J. L. Portsman, dazed by the effects of nitrous oxide gas, stole dental instruments and was arrested."

I chanced to meet a dentist, a few days ago, who has an office in this city. He had a black eye and a badly swollen hand. I inquired if he had been the victim of a hold up? He said: "No, but I administered nitrous oxide gas to a patient who became frantic, got out of the chair and tore the office up in general." During the mix up the doctor got a punch in the eye and an injured hand, instead of a kick in the stomach.

It is needless to go into detail and mention the very unpleasant things that happen under chloroform and ether.

I mention these few facts to prove to you that the thing for which Dr. Ritter condemns somnoform happens under all anesthetics.

The second case he mentioned is that of a young lady who collapsed during the operation and was in an unconscious condition for thirty minutes. I should like to call your attention to an article pub-

lished in the *St. Louis Democrat,* November 23, 1906: "Dentist's patient given too much gas. W. S. McKelvy, who resided in Richmond Heights, St. Louis county, Mo., was given an overdose of gas in a dental parlor on Olive Street yesterday afternoon and was removed unconscious to the City Hospital. After his condition had been pronounced critical and Policeman Dickson had written a report to that effect McKelvy regained consciousness and left the hospital."

I will mention one case from my own experience. A few years ago I sent a young lady to one of our nitrous oxide specialists to have a tooth extracted. Immediately after the operation she collapsed and remained in that condition for nearly two hours and was sent home in a cab. She did not fully recover for two weeks.

It is a very common thing to hear people say they have taken gas and were sick for two weeks after.

Even though the patient did collapse, is it not a well known fact that patients often collapse after an administration of nitrous oxide, chloroform or ether? They will often collapse after an operation when no anesthetic has been used, and in a great many cases from, seemingly, no cause whatever. Then why should Dr. Ritter condemn somnoform only for results which are quite common under many other conditions?

Dr. J. A. Bullard, of this city, states in a discussion of Dr. Ritter's paper, page 1017 of the same journal: "Somnoform is good only for the extraction of deciduous teeth or for similar short operations, and it cannot be given the second time without the patient becoming nauseated."

Those of the profession who have extracted from one to twenty permanent teeth, under the one administration, and have given it from one to eight times at the same sitting, without the patient becoming nauseated, will agree with me that Dr. Bullard certainly cannot be familiar with the administration of this anesthetic. In another place he says, "In my own case after inhaling somnoform my feeling for forty-eight hours could be best described as like that resulting from the combination of tobacco and sea-sickness."

Dr. Rolland, in his paper, gives a list of patients who do not take somnoform well which is a very small per cent.

However, I must give Dr. Bullard credit for saying some very good things in favor of somnoform.

Dr. P. T. Diamond, in discussing Dr. Ritter's paper says on page 1025: "Those who have been using somnoform I am sure will feel like discarding it as an anesthetic after having heard this paper."

As I have said before Dr. Ritter did not mention any terrible results from the use of somnoform that do not occur under any other anesthetic, and I cannot understand why those who have been using somnoform, giving hundreds of administrations without any bad results, should discard it as an anesthetic.

Again he says, "Ethyl chloride, if used alone, is better than somnoform for the reason that it is safer." He gives us no authority for such a statement.

To again quote Dr. Diamond: "Nitrous oxide is good enough for anybody."

If the five deaths that have occurred under nitrous oxide during the past two years, in this country, had been in Dr. Diamond's immediate family, would he have been willing to stand before one of the largest dental societies in the world and say: "Although I have lost five members of my family during the past two years from the effects of nitrous oxide, still I think nitrous oxide is good enough for anybody."

I feel sure that the majority of dentists will agree with me that nitrous oxide is a very safe anesthetic but we are looking for something safer. In closing the discussion Dr. Ritter says, on page 1026, "I have met dentists who say they have no more fear of Somnoform than of so much water."

A man who makes such a statement is as rash as was Dr. Ritter in picking out one particular anesthetic and condemning in it the very thing that occurs in all others. I am not surprised that the members of his local society accused him of losing his head.

Since Dr. Ritter has discarded his somnoform apparatus, and is called upon to extract teeth under an anesthetic, he will call a physisian to administer for him that extremely safe anesthetic (chloroform) which has a fatality of only thirty in the past two years, instead of using that very dangerous anesthetic, as he calls it (somnoform) which has a fatality of one out of the many thousands of administrations in this country.

We will now take up an article written by Harvey E. Harrison.

D. D. S., of Chicago, printed on page 249 of the April, 1906, number of *Items of Interest*: "It is unfortunate that any agent intended to ameliorate the suffering of humanity should become so engulfed in commercialism and be exploited with nothing in view, seemingly, but the dollar mark."

I should like to ask Dr. Harrison if he administers an anesthetic for the pleasure of lessening the suffering of humanity or if he makes a charge for each administration? If it be true that he does make a charge he should be reminded of that old saying, "People who live in glass houses, etc."

Dr. Harrison, eager to give as large a fatality as possible under somnoform quotes Dr. J. W. McCarthy, of Birmingham, Eng., who says: "Since the introduction of this anesthetic, and during the seven years of its administration, there have been three deaths caused by its use." He gives us no official report of the same.

Why did not Dr. Harrison continue his article and call his readers' attention to the following list of fatalities, under nitrous oxide in 1905, published in our American journals?

March 20, 1905, *New York Sun.*

May, 1905, *Dental Digest,* Wilkesbarre, Pa.

June, 1905, *Dental Digest,* Eastborne, Eng.

December, 1905, *Dental Digest,* New York City.

The difference between a record of seven years with three deaths (not authentically reported) and one year with four deaths will show very readily why Dr. Harrison did not care to mention these facts in his paper on "Somnoform versus Nitrous Oxide."

Dr. Truman W. Brophy, Dean of the Chicago Dental College, one of the most noted dental colleges in the world, and one that is looked up to as being up-to-date along all lines of the profession, in discussing Dr. Ritter's paper said in the October number of the *Dental Review,* page 1021: "I know nothing about somnoform; I am willing to await the results from the administration of this new agent."

It has been seven years since somnoform was introduced and Dr. Brophy is still waiting.

Dr. G. V. Black, dean of the Northwestern Dental College, another noted college, in an article written in the November, '06, number of the *Dental Digest,* says: "In regard to Somnoform, it is a proprietary mixture for anesthetic purposes that is being pushed

for gain and many of our young men are taking up this in place of the long-tried nitrous oxide.

"I want to say to young men who are using it that if they are so unfortunate as to have an accident they are liable to find scant sympathy before a court."

I should like to ask how much sympathy Dr. Black would find before a court if it were proven that he had been graduating students from his school for many years, giving them diplomas which entitles them to a license to administer all kinds of anesthetics and without any actual experience, and that thirty people have lost their lives, in the dental chair, during the last two years, under chloroform.

If it is a fact that very careful men, after experimenting, have dropped this anesthetic, I should like very much to have these careful men give me some of their reasons for dropping it, as I have been using Somnoform, exclusively, for the past two years and find it preferable in many ways to the long-tried nitrous oxide.

Dr. G. W. Cook, dean of the dental department of the University of Illinois, still another of the noted dental colleges in this country, in an editorial printed in the December, '06, number of the AMERICAN DENTAL JOURNAL, p. 744, says: "It should be borne in mind, however, that a few unfavorable results should not condemn an agent and for that reason we should prepare ourselves to understand thoroughly what to do in case of trouble from the use of an agent like Somnoform. Every person who contemplates the use of these agents should first experiment on animals and determine their action and the blood pressure and the various changes produced in the animal during its administration."

I should like to ask Dr. Cook how many dentists in this country who are using Nitrous Oxide were compelled to experiment on animals during their college course or have experimented on animals since leaving school, to find out its physiological action?

I should like to ask members of the faculty of our different schools how many students they have graduated in the past few years, presented with a diploma entitling them to a license to administer all kinds of anesthetics, who were compelled to experiment on animals that they might become familiar with an anesthetic, its action, blood pressure and the various changes produced in the animal during the administration?

I should like to ask Dr. Cook why, if he means to be neutral

in his journal in regard to anesthetics, he took the trouble to mention the number of fatalities under Somnoform and not of the others?

In speaking of fatalities he says: "There have been recorded (not authentically) three deaths resulting from the use of Somnoform. One of these is beyond question a well established death, the others are deaths surrounded with or more or less misgivings."

The two deaths which Dr. Cook says are without authority are probably two of the three which are reported to have occurred at my office.

I should like to state that in all my several hundred administrations I have never met with a single alarming symptom, much less three deaths.

Dr. Cook says further: "The number of deaths in the dental office is certainly becoming alarming, and it should make the dentist more cautious in the handling of general anesthetics."

In the treatment of inflammation the first thing we do is to remove the cause, add some little stimulant and nature will aid to a speedy cure.

If the mortality list in the dental chair has become alarming, I should like to suggest to the faculties of our dental colleges that they may remove the cause by compelling the students that they graduate to experiment with these anesthetics on animals, and be required to administer so many anesthetics under the care of the demonstrator, and be sure that every student is proficient in administering all anesthetics. By doing this you will accomplish a speedy cure, and a few years hence the number of fatalities in the dental chair will be reduced to a minimum.

Dr. Cook again says: "We are constantly being asked has the dentist a right to administer general anesthetics? We would say that he has, provided he is competent."

I should like to ask the faculties of our schools if the graduates are not proficient, whose fault is it?

Dr. Cook goes on to say: "If an individual dies in the dental chair it is soon made public property and becomes the gossip of the community, not only injuring the individual dentist who is so unfortunate as to have such an accident, but places the profession as a whole in an embarrassing position."

If this be true I think it would be wise for the dental societies to appoint a committee to wait on the editors of the local papers and request them to withhold the name of the dentist who is so unfortunate.

By doing this they would save a brother practitioner from this embarrassing position.

I should like to ask Dr. Cook why, when he referred his readers to an article on Somnoform, he referred them to Dr. Ritter's article only? I infer from the article in question that Dr. Ritter has had very little experience and knows scarcely anything about the anesthetic.

Why did he not refer them to the AMERICAN DENTAL JOURNAL, October, 1905, page 592, G. C. Bowles, Detroit, Mich.; November, 1905, page 648, E. G. P. Philpots, Corowa, Australia; December, 1905, page 716, W. R. Rathbone, Cuero, Tex.; February, 1906, page 78, B. H. Cooper, Boston, Mass.; November, 1906, page 659, Noble M. Eberhart, M. S., M. D., Chicago.

Dental Cosmos, December, 1904, page 1052, Florestan Aguilar, Madrid, Spain.

Dental Review, October, 1906, page 996, W. E. Tennant, Fond du Lac, Wis.

Texas Dental Journal, May, 1905, L. P. Robinson, Marlin, Tex.

Colorado Medical Journal, May, 1905, William L. Hess, M. D., Denver, Col.

Dental Brief, November, 1906, page 671, W. H. Arnold, Franklin, Ky.

Dental Brief serial article entitled "Anesthesia in Dentistry," by W. H. DeFord, A. M., D. D. S., M. D., Des Moines, Ia., and others too numerous to mention.

In his editorial Dr. Cook advises members of the profession to experiment on animals to learn the action of anesthetics.

According to his theory, if the general practitioner wishes to become wise, and keep posted on all advanced lines of the profession, he would be obliged to spend all his time in the laboratory or woodshed, and have no time left for general practice. A busy practitioner, after leaving his office, if he happens to have a family, prefers to spend his spare time with them. Of course, if he happens to be a bachelor he can spend his idle time experimenting, if he cares to, but there are usually more agreeable ways of spending it.

I believe when a man wishes to become more thoroughly posted on advanced ideas in oral surgery he goes to men who are authority in such matters, such as Drs. Brophy, Gillmer, Carpenter and Moorhead; for bacteriology he goes to Drs. Cook, Black and DeWitt; for materia medica, to Drs. MaWhinney, Buckley and Jones; for prosthetic dentistry, to Drs. Black, Goslee and Cigrand; for operative dentistry, to Drs. Black, Ditmar and Johnson; for anesthetics, to Drs. Hewett, Wells and, last but not least, Dr. Rolland. He reads the writings and attends the clinics of all these men who have made a life study of these particular lines, and in this way a man will learn more in one hour than he could in a month from his own experiments.

Why, then, advise a man to experiment on animals? I believe the school is the place where this should be done, under the personal care of the professors and the demonstrators, and I also believe that the student should be drilled in giving so many administrations of different anesthetics, so that he may be capable of accepting the one which is best indicated for the particular case.

We have good authority for saying that Nitrous Oxide cannot be satisfactorily employed in high altitudes and certain warm climates. As Somnoform is much safer than chloroform or ether, it is preferable to these.

In putting in a gold filling one dentist will use one manufacturer's product while another will use a different product, because each man has become familiar with that particular kind, knows thoroughly its adaptation and working qualities, and, naturally, thinks his is the best, while in fact there may be scarcely any difference.

In local anesthetics one man may use Acestoria, another uses P. D. Anesthetic Tablets, or other kinds, any or all of which are good. He becomes familiar with it and considers it better than the rest. So it is with general anesthetics, a practitioner who has been using Nitrous Oxide for years becomes familiar with its induction and action and has met with marked success, would be foolish to discard it unless there had been an anesthetic found that was far superior to it in every respect.

Others have tried Somnoform, and have had the most remarkable success with it. Particularly the country practitioner, who finds the apparatus is cheaper and the cost of the administration just half

that of Nitrous Oxide. For instance, a cylinder of gas will cost $2, with express charges of 25 cents each way, making a total of $2.50 for an average of six anesthetics (quoting Dr. Bullard), while with Somnoform he will get twelve capsules, equal to twelve administrations, if properly given, for $2.50. Which would seem to be a great inducement in favor of Somnoform, particularly for the country practitioner who gets only one dollar for each administration. Furthermore, when a man is practicing in high altitudes or warm climates where Nitrous Oxide cannot be used, I should consider Somnoform, with its remarkable record, would be far preferable to chloroform or ether.

Dr. Cigrand, while Dean of the Dental Department of the University of Illinois, had a reputation for recognizing advanced ideas, and probably became alarmed at the number of fatalities in the dental chair, under chloroform, and realized that a safer anesthetic should be used.

After hearing of the astonishing record that had been made with Somnoform he introduced it into the school as a substitute for chloroform.

I understand that Dr. Cook, present Dean of the Dental Department of the University of Illinois, is following out Dr. Cigrand's ideas, and from the tone of Dr. Cook's editorial I presume the student will be compelled to experiment on animals.

In the December (1906) number of the AMERICAN DENTAL JOURNAL, page 732, is an article by Dr. F. C. Eve, copied from the *British Dental Journal* of March, 1906, entitled "Ethyl Chloride," in which he states that Ethyl Chloride is a better and much safer anesthetic than Somnoform. He gives the fatality of Ethyl Chloride as about one in 16,000, and says that he knows personally of no less than eighteen deaths from its use, nearly half of them being in the dental chair. He also states that nearly one-third of the cases either become nauseated, have headache, or collapse under Ethyl Chloride.

We who have been using Somnoform can safely say that we have no such record to show, and as far as the number of fatalities is concerned, after a very diligent search through the literature of this country, since Somnoform was introduced, I have been able to find but one death officially reported. Dr. Eve admits that he has not administered Somnoform more than a half dozen times.

I recently sent out letters of inquiry to all the dentists of this city and received a number of replies very flattering to Somnoform, which at present I am not at liberty to print. These letters were from dentists who had given all the way from 10 to 900 administrations, and it was partly owing to these gratifying reports that I decided to present this paper for discussion. I may ask permission to print these letters in closing the discussion.

The following is a list of the fatalities that I have been able to secure, under different anesthetics. These fatalities all occurred in the dental chair since 1905, when Somnoform was introduced in this country:

Dental Digest, 1905:
January 3, Sacramento, Cal.; chloroform.
January 26, Birmingham, N. Y.; ether.
May 26, Schoolcraft, Mich.; chloroform.
May 10, Wilkesbarre, Pa.; nitrous oxide.
May 24, Fredericks, Md.; chloroform.
July 10, Pittsburg, Pa.; chloroform.
July 25, New Orleans, La.; chloroform.
July 25, Syracuse, N. Y.; chloroform.
August 2, Rochester, N. Y.; ether.
October 14, Providence, R. I.; chloroform.
November 4, Mansfield, Ohio; chloroform.
December 27, Preque Islands; chloroform.
December 10, Jersey City, N. J.; chloroform.
December 7, New York City; nitrous oxide.
December 11, Beloit, Wis.; chloroform.
Dental Digest, 1906:
March 14, Osage, Ia.; chloroform.
April, Covington, Ky.; chloroform.
April 26, Los Angeles, Cal.; chloroform.
April, Toronto, Ont.; chloroform.
April 23, Greensville, N. H.; chloroform.
April 12, Highland, Minn.; chloroform.
June, Eastbourne, England; nitrous oxide.
July 27, Boone, Ia.; chloroform.
August 26, Glenwood, Wis.; chloroform.
October 23, Sakatoon, Sask., Canada; ethyl chloride.

November 6, Bluffton, Ohio; chloroform.
Dental Summary, 1905:
September, Kalamazoo, Mich.; chloroform.
September, place not stated; chloroform.
October 5, Rochester, N. Y.; ether.
November 6, Anacortes, Wash.; chloroform.
December, Providence, R. I.; chloroform.
June, 1906, Osage, Ia.; chloroform.
July 6, place not stated; chloroform.
Newspaper reports:
August 6, 1906, *New York Evening Sun;* chloroform.
August 27, 1906, *Minneapolis Tribune;* chloroform.
November 7, 1906, *Toledo Blade;* chloroform.
March 20, 1905, *New York Sun;* nitrous oxide.
November 26, 1906, *Morristown* (Pa.) *Herald;* nitrous oxide.
August 8, 1906, *Buffalo News;* chloroform.
September 12, 1906, Rockford, Ill.; somnoform.

A few months ago a patient died in one of the dental parlors of this city. As an account of the case was not published, I received my information from a neighboring practitioner who visited the office where the death occurred immediately afterward. When I told him my intention was to add this information to my paper he asked me not to give his name for publication, but if any one doubts the truth of this statement I can send him to my informant, who will corroborate it.

In summing up the number of fatalities during the past two years we find thirty under chloroform, five under nitrous oxide, three under ether, one under ethyl chloride and one under somnoform. I have been particular to give the date of the fatality, the name of the place where it occurred and the name of the journal in which it was printed, in order that any one who wishes to verify my statements will be able to do so. I have been unable to secure a list of fatalities under anesthetics from other countries.

I shall look forward with a great deal of interest to the report of the annual meeting of the Institute of Dental Pedagogics, to be held in Chicago, December 27, 28 and 29. I am pleased to note that one of the subjects to be discussed is, "Teaching of Anesthesia."

In closing I should like to add a personal letter from Dr. Rolland:

GENTLEMEN: I am a little embarrassed to answer your request, as I have never been placed in the position of having to do something to prevent a fatal accident. I have used Somnoform every day for seven years, and have never had serious trouble, except a few epileptics and hysterics. In the event of a serious accident happening, I would advise the following of the same course as if any other anesthetic had been used, such as artificial respiration, rhythmic pulling of the tongue, injection of caffeine, oxygen, etc. I do not indicate anything in particular, as I have never had occasion to use anything, and I firmly believe that, barring a rupture or aneurism, there should never be an accident in connection with the administration of Somnoform, provided the operator watches his patient. Very truly yours,

(Signed) G. ROLLAND.

Bordeaux, France.

EDITORIAL

Dental education is a subject which should and does interest every fair-minded and well-meaning dental teacher. We as a profession ask the public, as well as other professions, to recognize us as among the learned professions of the world, and yet we are in many respects behind the majority of the professions and educational institutions in the absolute requirements for graduation from dental colleges, and this is due to our system of education.

I have had examination papers from the very best and from some of the very worst dental students that have come up before the State Board of Dental Examiners, and it has been my extreme privilege to review the answers given to many State Board questions. I am surprised at the brilliant and clear answers made by some, while in other cases it is extremely surprising how a student can pass through a dental college, having had the privilege of listening to

perhaps only a few lectures on a subject, and yet go before a State Board and give such unheard of answers.

A question that was put by one of the State Board of Dental Examiners on the subject of anatomy was, "What muscles are brought into action in the process of deglutition?" and out of a class of thirty-two there were not more than one-third of that number who knew what deglutition meant. Another question in therapeutics asked by a dental board examiner was, "Give the treatment of mercurial stomatitis." The student's answer was, "I would wash out the stomach of the patient, give an emetic, and strychnine as a heart stimulant." And many other questions and answers quite in the same line as those just mentioned.

It seems strange that it can be possible for a student to pass through a dental college and expect to pass an examination before a State Board with so little knowledge of the subject most pertinent to his professional calling. Of course, the strictly mechanical dentist would say all that a student needs is to fill a tooth, make a band for a crown, take an impression and make a rubber plate. But in prosthetic dentistry, crown and bridge-work, the questions and answers are equally as absurd. When a man stands at the chair and fills a tooth with gold, amalgam or porcelain; or takes an impression for a crown, or an artificial denture, and cannot produce on paper his method of performing such an operation, proves that there is something radically wrong with our methods of teaching, or with the student's mental capacity to grasp the explanations given in text books or gone over in the lecture room.

If one was to make an inquiry as to who or what class of students would be most liable to make such blunders he would find that these answers are not always given by the student whose educational advantages had been limited, for many of the high school graduates are just as poor in their dental examinations as the student with a limited education when he enters the dental college. G. W. C.

MEETINGS

IOWA STATE BOARD OF DENTAL EXAMINERS.

The Iowa State Board of Dental Examiners will hold its next meeting for examination at Iowa City, February 6, 7, 8, 9, 1907.

Candidates will be furnished with proper blanks and such other information as is necessary upon application to the secretary.

All applications must be filed with the secretary five days prior to the date of examination.

Address all communications to

E. D. BROWER, D. D. S., Sec'y.,
Le Mars, Iowa.

BANQUET TO DR. G. V. BLACK.

The Fraternal Dental Society and the St. Louis Society of Dental Science will unite in giving a banquet in honor of Dr. G. V. Black at the Jefferson Hotel, St. Louis, the evening of January 15, 1907. The afternoon of the same day Dr. Black will deliver an illustrated lecture on some phase of operative dentistry.

The long and untiring efforts and valuable scientific contributions of Dr. Black easily make him the foremost dental scientist the world has ever produced. No dentist, living or dead, so much deserves the thanks and praise of his professional associates. A most cordial invitation is extended to the members of the profession to be present at both lecture and banquet and assist in honoring Dr. Black. Those desiring covers reserved for banquet will remit $5, price per plate, to Dr. Richard Summa, secretary, Oriel building, St. Louis, before January 12.

GEO. A. BOWMAN, Chairman.
A. H. FULLER,
EDWARD H. ANGLE,
D. O. M. LECRON,
ADAM FLICKINGER,
WM. CONRAD,
BURTON LEE THORPE,
Committee.

WISCONSIN STATE BOARD OF DENTAL EXAMINERS.

The next meeting of the Wisconsin State Board of Dental Examiners for examination of candidates for license to practice dentistry in Wisconsin, will be held on Monday, January 28, 1907, at the Hotel Pfister, Milwaukee, Wis.

Application must be made to the Secretary fifteen days before examination. The candidate must be a graduate of a reputable dental college, or have been engaged in the reputable practice of dentistry for four consecutive years, or an apprentice to a reputable dentist for five years.

For further particulars apply to J. J. Wright, Secretary, 1218 Wells Bldg., Milwaukee, Wis.

TWENTY-FIFTH ANNIVERSARY REUNION, CELEBRATION AND CLINIC OF THE CHICAGO COLLEGE OF DENTAL SURGERY ALUMNI ASSOCIATION.

On January 16 and 17, 1907, the Alumni Association of the Chicago College of Dental Surgery will celebrate the twenty-fifth anniversary of the establishment of the college by holding a grand reunion and clinic. Arrangements have been made for a number of papers, a very extensive clinic, a theater party and a banquet. A railroad rate of a fare and a third for the round trip from all points in the United States and Canada on the certificate plan has been arranged for.

A cordial invitation is extended to the general profession to be present, as well as all members of the Alumni Association and all graduates of the college.

J. P. Buckley,
R. C. Brophy,
Committee on Publicity.

THE OHIO DENTAL SOCIETY.

The Ohio Dental Society met in Columbus, December 4, 5 and 6. A paper was read by Dr. J. P. Buckley, of Chicago. Dr. S. D. Boak read a paper entitled "Some Observations of an Army Dentist." A committee composed of Dr. L. P. Bethel, Columbus; J. R. Callahan, Cincinnati, and L. E. Custer, Dayton, were appointed to present resolutions to Congress to pass a bill now before that body to increase the

number of army dentist surgeons. The following were elected as officers for the ensuing year: President, Dr. H. H. Brown, Columbus; first vice-president, Dr. C. I. Keely, Hamilton; second vice-president, Dr. W. H. Whitslar, Cleveland; secretary, Dr. R. F. Chapman, Columbus.

SOUTH DAKOTA STATE BOARD.

The next examination of the South Dakota State Board of Dental Examiners will be held at Sioux Falls, S. D., January 29, 30, 31, 1907, beginning at 1:30 p. m. All candidates for examination must bring diploma from reputable dental colleges or affidavit of having been engaged in the practice of dentistry for at least three years immediately preceding said examination. Instruments and materials necessary to do all kinds of operative and prosthetic work will be needed at this examination. Vulcanizer and lathes will be furnished by the board. All applications must positively be in the hands of the secretary by January 22d.

G. W. COLLINS, Secretary,
Vermillion, S. D.

ILLINOIS STATE BOARD OF DENTAL EXAMINERS' MEMORIAL RESOLUTIONS TO DR. C. R. TAYLOR.

WHEREAS: On roll call at the opening session of the November (1906) meeting of the Illinois State Board of Dental Examiners, the name of Charles R. Taylor receiving no answering response, makes us pause to pay tribute to his worth and memory. Little did we think at our last parting that at our next meeting our long-time friend and colaborer—strong in all the elements that constitute a lovable man—would be beyond the reach of voice and his chair stand vacant at our table, reminding us that the strongest ties of friendship must sooner or later be broken, but not forgotten. In token of our affection and appreciation of Dr. Taylor's influence in private and public life for the betterment of all who had the good fortune to know him, it is

Resolved, That a page of our Records be set apart, and the sentiments herein expressed be inscribed thereon.

HARRY ST. GEORGE TUCKER.
PRESIDENT.

C. BROOKS JOHNSTON.
CHAIRMAN, BOARD OF GOVERNORS.

ROBERT H. SEXTON, CHIEF,
DEPT., CONGRESSES & SPECIAL EVENTS.

PRINCIPAL OFFICES,
NORFOLK, VIRGINIA.

THE JAMESTOWN DENTAL CONVENTION

NORFOLK, VIRGINIA, SEPTEMBER, 1907

COMMITTEE ON ORGANIZATION

BURTON LEE THORPE, CHAIRMAN,
305 NORTH GRAND AVE.,
ST. LOUIS, MO.

H. WOOD CAMPBELL, SECRETARY,
SUFFOLK, VIRGINIA.

F. W. STIFF, TREASURER,
600 E. GRACE STREET,
RICHMOND, VA.

R. H. WALKER,
NORFOLK VIRGINIA

THOS. P. HINMAN,
INMAN BLDG., ATLANTA, GA.

The Jamestown Dental Convention, to be held under the auspices of the Jamestown Exposition Company, the southern branch of the N. D. A., and the Virginia State Dental Association will convene at Norfolk, Va., September 10 to 12, 1907. The Jamestown Exposition Company have appointed the following gentlemen a committee on organization, to elect officers in advance of the meeting, to appoint all committees, to finance the meeting, to bring it to a successful termination: Drs. Burton Lee Thorpe, of St. Louis, Mo., Chairman; H. Wood Campbell, Secretary, Suffolk, Va.; F. W. Stiff, Treasurer, Richmond, Va.; R. H. Walker, Norfolk, Va.; Thos. P. Hinman, Atlanta, Ga.; J. E. Chace, Ocala, Fla.; Clarence J. Grieves, Baltimore, Md. The Committee on Organization have appointed Dr. Clarence J. Grieves, of Baltimore, Md., General Chairman of the Clinic Committee, and Supervisor of Clinics. A number of well known men will assist him on the General Committee. State clinic chairmen have been selected from every state in the Union.

The clinics are to be the principal features of the convention. It is expected to bring about the largest and most instructive dental clinic ever held. A surgical clinic will also be held under the supervision of Dr. L. M. Cowardin, of Richmond, Va. The other members of this committee are J. Y. Crawford, Nashville, Tenn., and A. G. Fredricks, New Orleans, La. Dr. F. W. Stiff, of Richmond, Va., is general chairman of the Membership Committee. Assistant state chairmen have been appointed from every state in the Union. Already membership fees are being sent in, and the promise is for the largest gathering of dentists ever held. Only five essays will be read at the convention, one by Prof. W. D. Miller, another by Prof. G. V. Black; the other three by well known southern dentists. Several exhibits of much interest to the profession will be held under the auspices of the

convention. Among them the dental manufacture exhibit, in charge of Dr. John W. Manning, chairman, Norfolk, Va. A comparative anatomy exhibit, in charge of Dr. W. M. Bebb, chairman, of Los Angeles, Cal. This exhibit will consist of 3,000 comparative anatomy specimens. To these will be added numerous other collections of interest. A dental historical exhibit, consisting of ancient instrument, operative and prosthetic work, books and photographs, under the chairmanship of Dr. Wm. H. Trueman, of Philadelphia, Pa. The orthodontia exhibit, showing a large collection of models, etc., under the chairmanship of Dr. H. E. Kelsey, of Baltimore, Md. The United States naval dental exhibit, showing 3,000 charts of the mouths of midshipmen, under the chairmanship of Dr. Richard Grady, the United States dental surgeon of Annapolis, Md. The exhibit of the United States army dental corps, under the chairmanship of Dr. John S. Marshall, of San Francisco, Cal., will show the equipment, method of keeping records, etc., used by the dental corps. A full list of the various officers, which are to be elected in advance by the Committee on Organization at their next meeting in February, 1907, and of the committees will appear in due time in the various dental journals. The Committee on Organization is expected to select officers in advance in order that the officers may be prepared for their duties before the actual convening of the convention.

A cordial invitation is extended to all reputable memhers of the profession to become members of this convention and assist the Committee on Organization in bringing about one of the best, if not the best, dental meetings ever held. The exposition itself offers an excellent opportunity for the busy practitioner to take a delightful vacation, see the wonderful historical, naval and military exhibit at the exposition, and also to participate in this meeting. The membership fee, which is $5.00, should be sent to Dr. F. W. Stiff, Treasurer, 600 East Grace Street, Richmond, Va. For further information address H. W. Campbell, Secretary, Sufiolk, Va.

THE CELEBRATION OF THE FIFTIETH ANNIVERSARY OF THE ST. LOUIS DENTAL SOCIETY.

The St. Louis Dental Society celebrated its fiftieth anniversary on the tenth of November by giving a banquet, which was attended by a large number from out of the city. On Saturday morning, November tenth, trains began to arrive in St. Louis from various directions into the Union station, and on almost every train there came a dentist to help celebrate the Golden Jubilee of the St. Louis Dental Society. There was a St. Louis dentist at each train, delegated to meet the incoming visitors. As all the trains arrived in St. Louis about the same time, all parties remained around the depot, and as the crowd approached from the different directions they were ushered into the big restaurant at the Union depot, where breakfast was served to them. After all the delegates had arrived and breakfast had been disposed of, the visitors were taken to the Planters' Hotel and assigned to rooms reserved for them.

By this time the morning was passing along pretty rapidly, and the rest of the forenoon was devoted principally in visiting and talking of the present and past in dentistry. At one o'clock a luncheon was served to the visitors, which consisted of everything good to eat. At two o'clock an electric car, which was specially built for observation purposes, was taken by the visitors through some of the interesting parts of St. Louis, going into the country some fifteen or sixteen miles. By this time a grove of maple trees was reached, and the leaves, with that beautiful color that comes with the autumn sunshine, were falling, which made a most beautiful sight. We do not, I think, sufficiently realize how wonderful is nature in changing the colors of leaves in autumn time. After a short stay in the country the beautiful palace car was again boarded by the party and all started for the city. Songs of good cheer were sang by all, even Thomas L. Gilmer tuned up his martial voice and sang.

Dr. C. M. Marshal, of St. Louis, was the toastmaster of the evening and presided with the grace and dignity of a Chesterfield.

Dr. Harry Hill, who is the president of the society, made the address of welcome. Dr. Hill had a beautiful address of welcome.

The next on the program was Dr. G. V. Black, of Chicago, who told in his characteristic manner some of the early trials and tribulations of the St. Louis Dental Society. Dr. Black called by

name many of the early pioneers of that association, and related some of the experiences that he personally had gone through, such, for instance, as having to walk ten miles across the country to the Mississippi river, where he could take a boat for St. Louis. Sometimes he would remain at the home of some member of the society over night, do a bit of shopping the next day and then start back to his Illinois home. He called to mind many events of that early pioneering society work. Dr. Black never looked so noble and grand as he did on this occasion.

The next on the program was Dr. C. N. Johnson, of Chicago, who made an excellent speech on the "Progress of Dentistry for the Past Fifty Years." Dr. Johnson's eloquence never reached such a high state of perfection on an occasion of this kind before, so far as my knowledge serves me. While he is always apt in his remarks, he was unusually so on this occasion.

The next speaker on the program was the Rev. Dr. Bradley, of St. Louis, with a brief sketch of the life of Uncle Remus. The quotations from the author's stories, told in the original dialect, made one feel that he was in the presence of the old darkey of the South. Dr. Bradley's interpretation of these dialect stories allowed one to get into the real philosophy of the author's subjects in such a way that one could not reach the depth without a great deal of reading and studying of the author's works.

The next speaker on the program was Dr. W. A. Thornton, of Toronto, Canada, on "Reciprocity." Dr. Thornton made one of the most brilliant efforts in portraying the idealistic reciprocity of the human heart and mind, which is far greater and higher than that of law. Dr. Thornton is not only a fine after-dinner speaker, but he is also a great philosopher.

Dr. Harry Tilleston, of Louisville, responded to the address of "Friendship." Harry had some beautiful thoughts incorporated in his address that pointed to the inestimable value of friendship and fraternalism. We ofttimes hear the remark made about the ingratitude and the selfishness of the world, and more especially do we hear dentists make disparaging remarks about their brother practitioner. Any one who could have heard Dr. Tilleston's speech would certainly have felt the warmth and glow of true friendship, for which the South

is especially noted. True friendship was beautifully exemplified on this occasion by the St. Louis Dental Society members.

Dr. Worthley, of Kansas City, responded to the address, "Dental Society as a Means of Education." It would have been no easy matter for the committee to have selected any one to respond to this toast with more grace and technical dignity than did Dr. Worthley.

The next on the program was Dr. J. H. Kennerly, of St. Louis, who reviewed briefly the members of the St. Louis Dental Society who had played an important role in dental education in St. Louis and in other parts of the country. The faithfulness with which Dr. Kennerly reviewed the history of dental education in St. Louis only serves to illustrate the great part St. Louis has played in dental education of the middle West and throughout the civilized world. When the names of a great many of the older dentists of St. Louis were mentioned one was struck with the tribute paid to each in their respective station before the profession and the public. Think of those grand men who took each other by the hand and marched on and on to a higher and nobler purpose for the benefit of mankind. These older men, many of whom have passed away, left the efforts of their labor in fertile soil, and there has grown up a power of intellect for the science and art of dentistry, yet the political ambition sometimes creeps in and for a moment disturbs the growth and development of the truest and best thoughts in educational advancements. But time soon corrects all of this, and the truth stripped for all of its political entanglements, self-aggrandizements and personal gains, will soon stand out clean and clear as the true path by which the honest man must travel. Deception and falsehood and personal gain in a professional life are some of the things now threatening the best interests of dentistry in America. When hard work, research and self-denial have no preference over the demagogue then the profession as a whole must suffer.

The Golden Anniversary of the St. Louis Dental Society was apparently free from anything of this nature. Nothing but good, wholesome fellowship, friendly and cordial intercourse existed with each and with the visitors, and it seemed like one large family, with aims and ambitions only for one purpose, and that the truest and best for mankind.

G. W. C.

MISCELLANEOUS

"WE HAVEN'T TIME."

It is surprising how much time we may find we have, and the things we may accomplish if we will but get busy and utilize the spare moments.—*F. C. Brush, International Dental Journal.*

PAINLESS REMOVAL OF PULP.

I have lately found that a combination of one-eighth grain of cocain and one drop carbolic acid, applied to the pulp, will enable me to remove it after five minutes without a particle of pain.—*Dr. Cormandy, Dental Digest.*

AFTER-PAINS OF EXTRACTION.

Relief may be given in a short time by inserting in the socket a pellet of absorbent cotton dipped in chloroform; place in each root socket, leaving it there a minute or two. In extreme cases repeat. Relief is sure to follow.—*H. A. Cross, Dental Review.*

USE OF MATRIX.

Advantages.—Shortens the operation; less exacting and tiring on operator; less distressing to patient; better contour for filling; saves cutting convenience angles; saves time in finishing; a more dense filling can be made and consequently stronger; separation previous to operation not necessary; no danger of squeezing filling material into interproximate space.—*Dr. A. E. Webster, Dominion Dental Journal.*

ORAL HYGIENE.

As an especially effective wash to decrease the ravages of caries, mercuric chlorid in the strength of one to twenty-five hundred forms a valuable constituent of the prophylactic dentist's armamentarium. In many mouths it will not be indicated, but in those mouths passing through the stage of extreme susceptibility it will be prescribed.—*George E. Hunt, Dental Digest.*

TO STOP PUNCTURE IN A RUBBER DAM.

For punctures of the dam or to stop leakage around the lower anterior teeth, dry the dam with cotton, melt a little baseplate wax on a spatula and carry to points of leakage. This result will gratify you.—*A. C. Peterson, Elmwood, Ill., in Tri-State Quarterly.*

REASONS FOR THE INSERTION OF PLASTIC FILLING IN DECIDUOUS TEETH OR IN THOSE WHICH DECAY RAPIDLY.

The reasons for inserting a plastic filling in young teeth or those decaying rapidly are not because these teeth are soft and may later become hard, or that they are not sufficiently dense to bear metallic fillings. Plastic filling and inlays, which come into this class, are used in young teeth, because—

1. They cause the young or debilitated less stress in insertion.
2. They are relatively non-conductors of thermal changes.
3. They cause less irritability to the perdentinal membrane during insertion.
4. The pulp in young teeth is so large that in many cases its life would be endangered by a metal filling.
5. Greater portions of enamel may be left for esthetic reasons.—*A. E. Webster, Dominion Dental Journal.*

RESOLUTIONS—DR. BREEDING.

At a meeting of the Southwestern Dental Society, held in San Antonio, November 3, 1906, the following were unanimously adopted:

WHEREAS: Our Heavenly Father has seen best to call to his last home Dr. J. B. Breeding, the son of our most worthy and highly honored president, and

WHEREAS: The deceased had long been recognized as a dentist of great capability; therefore, be it

Resolved, That we place on record this testimony of our extreme sympathy for our loved president in his bereavement.

Resolved, That we tender to Dr. and Mrs. J. E. Breeding our heartfelt sympathy and sincere condolences.

Resolved, That a copy of these resolutions be printed in the Practical Dental Journal and that number be sent to Dr. and Mrs. Breeding.

THE COMMITTEE.

PERSONAL AND GENERAL

Dr. D. M. Kelsey, a dentist at Dallas, Texas, died November 16th after a lingering illness.

Dr. C. N. Hickok, a dentist at Bedford, Pa., died December 2d at the age of eighty-six years.

Peck-Sanford.—Dr. A. L. Peck, of Osage, Iowa, and Mrs. Hattie Sanford were married recently.

Psi Omega Dental Fraternity held a meeting and gave a banquet in New Orleans November 15th.

Dr. J. H. White, a dentist at Charleston, Mo., was killed in a runaway accident while on a camping trip.

Accidentally Shot.—Dr. W. E. Pruner, a dentist at Leaf River, Ill., was accidentally shot in the hand while hunting.

Actor Sued for Dental Bill.—Wilton Lackaye, an actor, has been sued for $400.00 by Dr. Robert Good, a Chicago dentist.

Dentists Win.—The Northwestern Dental football team was victorious over the Northwestern Medical School by a score of 6 to 0.

Dr. James Rogers, a pioneer Chicago dentist, died November 16th. He had practiced dentistry in New York and Illinois for fifty years.

Francis D. Nellis, an aged dentist in Syracuse, N. Y., died November 20th. He had practiced his profession in Syracuse for over forty years.

Dentist Seriously Ill.—Dr. B. M. Somerville, formerly of Peterborough, Ont., but now located in Chicago, is seriously ill with typhoid fever.

Haller-O'Leary.—Dr. F. D. Haller, of Marshall, Mich., and Miss Mary O'Leary, of Jackson, Mich., were married December 3d in Marshall.

Jones-Roop.—Dr. Howard Jones, of Philadelphia, Pa., and Miss Anna Frances Roop, Germantown, Pa., were married December 8th in the latter place.

Quinlin-Clayton.—Dr. Michael Quinlin, of Gilman City, Mo., and Miss Myrtle Clayton, of Marysville, Mo., were married December 1st at Gilman City.

First District Dental Society of South Dakota held a very successful meeting in Yankton November 14th. The society is a branch of the state society.

Pletcher-Close.—Dr. J. W. Pletcher, of Pacific, Mo., and Miss Blanche Close, of the same place, were married December 5th. They will reside in Pacific.

Dennis—Jenkins.—Dr. C. P. Dennis, of Portsmouth, Ohio, and Miss Anna Jenkins, of Williamsburg, Ohio, were married November 28th at Batavia, Ohio.

Dr. J. R. Walton, a dentist at Clarksville, Tenn., died December 12th of jaundice. He was a graduate of the Vanderbilt University twenty-two years ago.

Died in Dentist's Chair.—Mrs. Richard Dermody, of Riga, died under the influence of chloroform in a dental chair while having teeth extracted November 15.

Injured in Gasoline Explosion.—Dr. F. M. Daniels, a dentist at Elwood, Ind., was seriously and probably fatally injured by the explosion of gasoline used for vulcanizing.

Convicted of Murder.—Dr. E. B. McCoy, a dentist at Casey, Kas., has been found guilty on the charge of murdering his wife. The evidence was all circumstantial.

Dentist Shoots Daughter.—Dr. W. S. Moore, a dentist of Ann Arbor, Mich., accidentally shot his six-year-old daughter in the leg while hunting deer at Portage Lake.

Dr. Billmeyer, a dentist of Chattanooga, died at Asheville, N. C., November 24th. The doctor was fifty years of age. He had been in Asheville for some months for his health.

Fire Caused by Burglars in an attempt to blow up the safe in the dental office of Dr. H. H. Carlson at Anoka, Minn., started a fire which caused damage to the extent of $10,000.

Dr. W. H. Richardson, a dentist at Lynden, N. Y., died December 15th at the age of eighty-two years. He had lived in Linden for fifty-two years practicing dentistry during all of that time.

Fatal Accident.—John Pollock is reported as dying from hemorrhage caused by the cutting an artery in his tongue by a pair of forceps in the hands of a dentist while having a tooth extracted.

Accidentally Killed.—Dr. E. H. Krentzman, a dentist of LaValle, Wis., was shot by the accidental discharge of a gun while hunting in Reedsburg, Wis., and died twelve hours later.

Dr. Stephen P. Barker, a dentist at Richfield Springs, N. Y., died December 8th at the age of eighty-five years. He was a native of Saratoga county. He had been postmaster and in the hotel business.

Dr. W. J. Adams, a dentist at Knoxville, Ill., is dead. The funeral was attended by all of the members of the Knox County Dental Association. Dr. Adams was a pioneer dentist, having practiced for many years.

Dr. John D. Hammond, a dentist at Monongahela, Pa., died November 27th as the result of a fall. He had practiced dentistry in Monongahela for forty years and was a graduate of the Philadelphia Dental College.

Dr. H. W. Shriver, a dentist in Omaha, died suddenly November 20th from a stroke of apoplexy. Dr. Shriver had been in ill health for some time of heart trouble and Bright's disease. He was fifty-five years of age.

Dr. James A. Sampsell, a dentist at New Orleans, La., died November 10th. Dr. Sampsell was a native of Canton, Ohio, and a graduate of the Starling Medical College at Columbus.

Fiftieth Anniversary.—The St. Louis Dental Society celebrated its fiftieth anniversary with a banquet at the Planters' Hotel November 10. Report of same by Dr. George W. Cook on another page.

Inlay Club No. 1.—A branch of the Iowa State Dental Society met in Burlington November 12th. The club is limited to thirty members. Papers were read by Dr. T. B. Monfort, of Fairbury, and Dr. C. E. Woodbury, of Council Bluffs.

Students Have Dermitis.—Ten members of the junior class in the dental department of the University of Buffalo have been suspended until they have fully recovered of dermitis. One of the students became infected from a patient.

The Fox River Valley Dental Association held its annual meeting December 11th at Geneva, Ill. The following officers were elected for the ensuing year: President, Dr. C. T. Dahlin, Elgin; vice-president, Dr. Earl Robinson, Aurora, Ill.; secretary-treasurer, Dr. C. A. Patterson, Genoa, Ill.

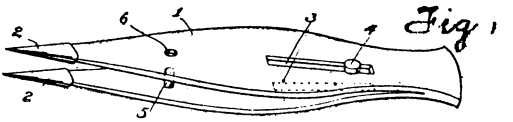
The Garhart Dental Manufacturing Company Sells Out.—The Harvard Company, of Canton, Ohio, has purchased the plant of the Garhart Dental Manufacturing Company, of Indianapolis, Ind., and will incorporate that company into the Harvard.

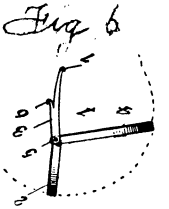
We Are Now a Profession.—Judge Taylor in the circuit court at St. Louis, Mo., has handed down a decision in which he declares that although the practice of dentistry may formerly not have been regarded as one of the learned professions it is so regarded today and takes rank with the practice of medicine and the law. He further states that a citizen has the right to engage in any business that is not prohibited by some special law, but not so with the learned professions. The case was the State of Missouri against the National Dental Parlors.

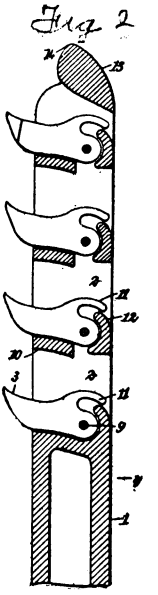
Robberies.—Dr. J. J. McCormick, Troy, N. Y., loss $200.00; Drs. Nichols and Nelson, Leavenworth, Kas., loss $350.00; Dr. R. O. Brittain, Boston, Mass., loss $30.00; Drs. Waller & Hickman, Fort Worth, Texas, loss $50.00; Drs. Burton & Dwight, Des Moines, Iowa, loss $150,00; Dr. C. B. Hess, Atlantic, Iowa, loss $35.00; Dr. Wm. Huff, Newark, N. J., loss $40.00; Dr. H. M. Dillman, Girard, Kas., loss $30.00; Dr. D. E. Smith, Wilton, Iowa, loss $15.00.

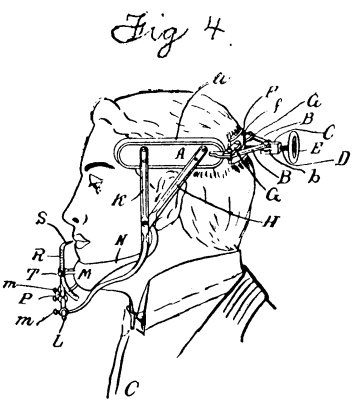
Removals.—Dr. L. Milliron from Flandreau, S. D., to Sioux Falls; Dr. Russell from Tower Hill., Ill., to Terre Haute, Ind.; Dr. R. B. Munn from Freeport, Ill., to Hampshire; Dr. G. E. Medley from Gracey, Ky., to Cadiz; Dr. Russell from Tower Hill, Ill., to Decatur; Dr. Arthur O. Knight from Atwood, Kas., to Amherst, Wis.; Dr. T. F. Wait from Storm Lake, Iowa, to Sioux City; Dr. E. J. Allen from New London, Wis., to Waupaca; Dr. F. A. Stewart from Virden, Ill., to Girard; Dr. J. F. McCamant from Warren, Ohio, to Niles.

836,299. Dentist's Tweezers.—Welby W. Burgin, Richmond, Ky. Filed February 11, 1904. Serial No. 193,091. Claim.—As an article of manufacture, a pair of spring-jaws and means to register them together, said jaws having fine tapered points of steel, and each having a sheath of noncorrosive and relatively infusible material such as platinum formed as a









closed tube and covering the sharp points neatly to their extreme ends, substantially as described.

830,289. Tooth-Bar.—Thorvald O. Berg, Little Falls, Minn. Filed October 13, 1905. Serial No. 282,673. Claim.—1. A tooth-bar comprising a body portion having openings, teeth mounted to swing in the openings, bridge-pieces upon which the teeth may rest, and guards at the heel portions of the teeth to prevent material from reaching the pivot-pins of the teeth.

825,356. Artificial Tooth for Crowns and Bridges.—William B. Short, New York, N. Y. Filed April 8, 1905. Serial No. 254,445. Claim.—As an article of manufacture, an artificial tooth formed of two permanently-united parts, a metallic backing part having an outwardly-protruding flange with slightly-tapering sides and a connecting top continuous therewith forming a shallow cavity with undercut sides, and a non-metallic facing of porcelain-like material having an extension at the rear of substantially the same width as its main portion and having a shallow groove extending along the sides and a shoulder across the top, the main portion extending above the shoulder, and an adhesive material permanently securing the extension of said facing in the cavity formed by the flanges and top of the backing,

the joint between the backing and the facing being substantially at the side edges and across the top of the extension a short distance below the top of the facing.

833,204. Dental Bite-Taker.—Lyter H. Crawford, New York, N. Y. Filed March 3, 1906. Serial No. 303,992. Claim.—1. A dental bite-taking device comprising temple-pads, means for clamping the said pads in position, a chin-piece pivotally supported from said temple-pads, an adjustable graduated bar and lip-line indicator, and means connecting said bar and chin-piece whereby the movements of the latter will be accurately noted on the bar.

835,432. Rubber-Dam or Bib Holder.—Henry A. Hughes, St. Louis, Mo. Filed May 5, 1906. Serial No. 315,432. Claim.—A rubber-dam or like supporter, comprising a frame including a front head member and a rear head member hinger together ,and a pair of dam-engaging members suspended from the frame, each dam-engaging member having two hooks formed integral therewith.

SOZODONT

We cannot Tell a Lie

about Sozodont. We never make an assertion that we cannot prove. When Uncle Sam, goaded by the bold and criminal methods of an ever increasing horde of swindlers, passed his Pure Food and Drugs Act, on June 30th, 1906, we went right down to Washington with our affidavit and registered in Uncle Sam's Book, and there you will find us under Serial No. 701. This means Sozodont is neither adulterated nor misbranded and fully complies with the law. It always did.

Sozodont is called the **"Honest Dentifrice"** because through sixty years no honest effort has been spared to give to the public a Dentifrice the teeth require. It is an alkaline, slightly astringent, deliciously fragrant deodorizer and tonic for the tooth and mouth structure. The liquid penetrates all the little crevices of the teeth, purifying them and toning them up. Sozodont Tooth Powder and Sozodont Tooth Paste with their exceptional abrasive properties and freedom from grit, put a beautiful polish on the surface of the teeth and render them the more immune from the accumulation of tartar.

We strongly advise the use of Sozodont Liquid at night, before retiring, and Sozodont Tooth Powder or Sozodont Tooth Paste in the morning, upon arising. This will keep the teeth in beautiful condition.

All the Sozodont Preparations for sale at every first-class toilet counter in the world.

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New York City.